



Register of Passive Fire Protection Products

ISSUE 1 | REVISION 4



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1. Introduction

This register of certified products (“Register”) lists Passive Fire Protection systems that have been formally issued with a laboratory report in accordance to AS 4072.1 – 2005, AS 1530.4-2005.

The register also includes systems tested to latest AS 1530.4-2014 standard.

The Register is published by the Fire Protection Association (New Zealand) incorporated (FPANZ).

The Register has been produced for reference by:

- › Territorial Authorities
- › Fire Engineers
- › Architects
- › Consultants
- › Designers
- › Installation, maintenance and inspection contractors
- › Building contractors
- › Building owners
- › Accredited Inspection Bodies

The Register is intended to be used for both new and existing installations, to ensure code compliant products are being specified, consented, installed. The Register will provide an invaluable listing of code complaint products available to industry.

2. Legislative and Standards Background

All fire stopping systems (*fire stops*) to be specified and accepted as part of the building consent and inspection approvals process shall be in accordance with AS4072.1-2005. Fire test reports or *Variations subject*

to Formal Opinion complying with the requirements of AS1530.4-2005 and AS4072.1-2005 shall be available upon request to support the system proposed and demonstrate on site installation where necessary.

3. Operation of the Register

The Register is self-regulating, each product/system supplier has submitted their product with the understanding that they will provide, upon request, the AS1530.4-2005 fire test or AS4072.1-2005 assessment report reference within their companies listing.

Any report featured in the Register of Passive Fire Protection Products will be within date.

Failure to issue the report upon request may result in that entry being removed from the Register.

4. Subscriptions and Updates

All enquiries regarding subscriptions, updates and copyright shall be referred to:

The Executive Director
Fire Protection Association NZ Inc
Private Box 302372, North Harbour
Auckland 1330

Phone: (09) 414 4450
Email: info@fpanz.org

The Register of Passive Fire Protection Products is available solely as a PDF and can be accessed through the “downloads & files” at section at http://www.fireprotection.org.nz/online-resources/FPA_equipment_registers 

5. Charges

Charges will be made by FPANZ for new listings, and for the provision of the annual audit and amendment service as follows:

- › An initial inclusion fee of \$550.00
- › Listing fee per product entry per supplier or manufacturer
- › Annual review Fee \$950.00 per supplier or manufacturer

| | FPANZ Members | Non FPANZ Members |
|--------------------|---------------|-------------------|
| 1-150 entries | \$950 | \$1330 |
| 151-300 entries | \$1450 | \$2030 |
| 301-450 entries | \$1950 | \$2730 |
| > 451 entries | \$2450 | \$3430 |
| Additional entries | \$125 | \$175 |

6. Annual Review

Technical and administrative reviews of the Register will be undertaken annually to revalidate its contents and enable deletion of obsolete products/systems, reports outside their validity date or non-trading manufactures/suppliers.

Manufacturers and suppliers who do not return the necessary documentation after three (3) requests and/or do not pay the applicable charge(s) detailed in section 5, will have their listing marked “OBSOLETE”, and after 12 months deleted.

7. Copyright

Copyright if the Register is held by FPANZ as publisher. All rights are reserved. **The Register may not be copied or reproduced in any way, either in whole or in part, without the express permission of FPANZ.** Obtained through the Executive Director.

8. Responsibility

The individual manufacturers or suppliers are responsible for the Register listings and the accompanying fire test performance data. FPANZ simply publish the individual systems for industry awareness purposes only.

9. Disclaimer

The Register details the listing status of products and components current at the time of issue. This listing status is subject to change without notice at any time.

The currency and validity of any particular copy of Register is dependent on multiple factors, including ongoing payment of subscription fees, postal services, and timely and correct filing of updates.

Listing in this Register does not imply any warranty whatsoever by the publishers or their technical advisors as to the field performance of products, systems or components listed.

Listing in this Register does not imply any responsibility whatsoever by the publishers or their technical advisors in regards to patents or other features or conditions applying in respect of any products, systems or components listed.

Neither the publishers nor their technical advisors, nor any of their officers or employees shall be liable to any person or company for anything contained or implied in, or omitted from, this Register or any update or any part of it.

10. Listing procedures and administration of the Register

All enquiries for listing, amendments, alterations and additions to listings shall be referred to FPANZ in the first instance for administration purposes:

The Executive Director
Fire Protection Association NZ Inc
Private Box 302372, North Harbour
Auckland 1330
Phone: (09) 414 4450
Email: fpanz@fireprotection.org.nz

These details will then be passed on to an FPANZ approved listing body.

A formal Suppliers or manufacturers declaration will be required concerning the validity and accuracy of the reports detailed within the listing.

Listing is available to any supplier/manufacturer who meets the listing criteria.

Listing Criteria:

- › AS1530.4 -2005 Fire Test Reports / AS4072.1 - 2005 Assessment Reports produced by ILAC accredited laboratories (International Laboratory Accreditation Cooperation).
- › Fire Test Assessment reports in accordance with AS4072.1-2005
- › Fire Test Reports in accordance with AS 1530.4-2005
- › Reports are within date
- › Reports featured in the Register not in the name of the listee must be accompanied by a manufacturers letter confirming the listee has permission to issue the report
- › Suppliers / Manufactures agree to issue listed/ referenced test reports upon request

11. Manufacturer's Declaration

A Suppliers or Manufacturers Declaration is a form of self-certification. It requires the Supplier or Manufacturer to make a formal declaration and to hold and maintain a technical file capable of justifying this declaration if legally challenged.

Such technical file would hold information such as supporting fire test data forming part of any formal assessment listed within the Register.

A Supplier or Manufacturers Declaration shall:

- › Be appropriately signed on official letterhead
- › Constitute a formal declaration of compliance with the relevant requirements of the New Zealand Building Code
- › Detail what products are covered
- › Acknowledge that the FPANZ or their technical advisers and officers carry no liability or responsibility for the products performance in the field

The following Declaration of Compliance is required to be completed for all submissions. Except where expressly permitted below, no modification or variation to this Declaration will be accepted.

The wording shall be reproduced on official company/ organisation letterhead with the appropriate details inserted [Where indicated thus]. Where alternatives are provided – viz manufacturer/importer, I/we etc., one alternative may be deleted as applicable.

COMPANY LETTERHEAD

Date

Address

The Executive Director
 Fire Protection Association NZ Inc
 Private Box 302372, North Harbour
 Auckland 0751

Declaration of Compliance

On behalf of [Name of company] (Company), I confirm as follows:

- 1. This Declaration of Compliance is made in respect of the product or products currently listed in the Passive Fire Protection Products Register and complies with the listing criteria as detailed in clause 10 page 4 of the register*
- 2. The Company acknowledges that the making of this Declaration is a condition to the Product being listed, or continuing to be listed in the Register*
- 3. The Company agrees and acknowledges that:*
 - (a) the FPANZ gives no warranty in respect of the Product; and*
 - (b) the FPANZ, its officers, employees, contractors or agents shall not in any way be liable or responsible, whether to the Company or to third parties for the performance of the Product.*

The Company agrees and acknowledges that:

- (a) any listed product not complying with the requirements detailed in clause 10 can be removed from the register at the discretion of the FPANZ board without redress by from the manufacturer/importer.*

The register is intended to be a benefit to industry to improve information transparency and building code compliance

Yours faithfully

Name of Company

_____ *Name of duly authorised signatory*

_____ *Title*

A copy of the current Register listing is to be sent by FPANZ to each manufacturer annually to obtain administrative revalidation of their listing and contact details, and to ensure that the manufacturer is still trading.

Each manufacturer shall be required to respond on official letterhead according to the following form:

REVALIDATION OF LISTING IN PASSIVE FIRE PROTECTION PRODUCTS REGISTER

I, on behalf of _____(name of Company) confirm that since the date of initial listing, or since the date of the last revalidation whichever is most recent, all published systems comply with the requirements detailed in clause 10 of the register.

I attach a copy of our current register listings, signed on the front page and initialed on all other pages.

Yours faithfully
Name of Company

Name of duly authorised signatory

Title



Section A: FPA Members



Section A: Fire Stopping Products/Solutions FPA Member Companies

- › 3M NEW ZEALAND LTD Industrial & Tapes Division**
 - Blank Opening 8-9
 - Electrical Penetration Services 9-14
 - Non-Insulated Non-Combustible Pipes 14-17
 - Insulated Non-Combustible Pipes 17-18

- › FIRESTOP CENTRE (Distributor of PROTECTA Brand)**
 - Blanks 19
 - Non-Insulated Metal Pipes 20
 - Insulated Metal Pipes 21-22
 - Plastic Pipes 22-23
 - Electrical Penetration Services 23-24
 - Seismic/Construction Joints 24-25
 - HVAC 25
 - Hatches 25
 - Flush Boxes / Socket Boxes 25

- › HILTI NEW ZEALAND LTD**
 - Blank Opening 26-30
 - Non-Insulated Non-Combustible Pipes 31-33
 - Insulated Non-Combustible Pipes 33-63
 - Non-Insulated Combustible Pipes 64-71
 - Insulated Combustible Pipes 72-79
 - Electrical Penetration Services 80-110
 - Construction Joints 111-113

- › iPASSIVE**
 - Blank Seals 114-115
 - Non-Insulated Non-Combustible Pipes 115-117
 - Insulated Non-Combustible Pipes 117-131
 - Non-Insulated Combustible Pipes 132-137
 - Electrical Penetration Services 137-146
 - Seismic/Construction Joints 146-148

- › RYANFIRE PRODUCTS LTD**
 - Non-Insulated Non-Combustible Pipes 149-151
 - Insulated Non-Combustible Pipes 151-153
 - Non-Insulated Combustible Pipes 153-156
 - Electrical Penetration Services 157-163
 - Seismic/Construction Joints 163-167
 - HVAC 168
 - Mixed Service Penetration Devices 168
 - Miscellaneous Penetrations 169

- › SNAP FIRE SYSTEMS**
 - Non-Insulated Combustible Pipes 170-182
 - Electrical Penetration Services 182

3M NEW ZEALAND LTD Industrial & Tapes Division

Manufacturer Code: 3M

94 Apollo Drive
Rosedale
Auckland 0632Ph: 0800 474 787
Email: 3mznitb@mmm.com
www.3m.co.nz/fireprotection

The products listed in this register have all been tested to AS1530.4-2005 or Assessed to AS 4072.1-2005 as referenced within the New Zealand Building Code.

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|----------------------|-------------|--------------------------------------|---|-----------|-----------------------------|---------------|
| BLANK OPENING | | | | | | |
| Blank | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/240/120 | Max opening 100 mm diameter | RIR FCO-3220F |
| Blank | Floor | 150 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/240/180 | Max opening 100 mm diameter | RIR FCO-3220F |
| Blank | Floor | 170 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/240/240 | Max opening 100 mm diameter | RIR FCO-3220F |
| Blank | Floor | 120 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/180/120 | Max opening 110 mm diameter | RIR FCO-3219D |
| Blank | Floor | 150 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/180/180 | Max opening 110 mm diameter | RIR FCO-3219D |
| Blank | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/90 | Max opening 425 x 300 mm | RIR FCO-3217C |
| Blank | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Max opening 100 mm diameter | RIR FCO-3220F |
| Blank | Wall | 100 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Max opening 100 mm diameter | RIR FCO-3220F |
| Blank | Wall | 150 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/180/180 | Max opening 100 mm diameter | RIR FCO-3220F |
| Blank | Wall | 170 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/240/240 | Max opening 100 mm diameter | RIR FCO-3220F |
| Blank | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Max opening 100 mm diameter | RIR FCO-3219D |
| Blank | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Max opening 100 mm diameter | RIR FCO-3219D |
| Blank | Wall | 150 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/180/180 | Max opening 100 mm diameter | RIR FCO-3219D |
| Blank | Wall | 170 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/240/240 | Max opening 100 mm diameter | RIR FCO-3219D |
| Blank | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Max opening 800 x 600 mm | RIR FCO-3217C |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|---|-----------|--|---------------|
| BLANK OPENING | | | | | | |
| Blank | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Max opening 800 x 600 mm | RIR FCO-3217C |
| Blank | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Max opening 425 x 300 mm | RIR FCO-3217C |
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/180/- | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/90 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Communication Cables only | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/240/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Communication Cables only | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/240/90 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Communication Cables only | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/240/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Communication Cables only | Floor | 120 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/180/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Communication Cables only | Floor | 120 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/90 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D2) Max opening 250 x 140 mm | RIR FCO-3219D |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|------------------------------------|---|-----------|--|---------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Communication Cables only | Floor | 120 mm Concrete | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ CP25WB+ Sealant | -/180/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 425 x 300 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ CP25WB+ Sealant Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300mm, each side) | -/180/90 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 425 x 300 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ CP25WB+ Sealant Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600mm, each side) | -/180/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 425 x 300 mm | RIR FCO-3217C |
| Power Supply cables only | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ CP25WB+ Sealant | -/180/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 425 x 300 mm | RIR FCO-3217C |
| Power Supply cables only | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ CP25WB+ Sealant Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300mm, each side) | -/180/90 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 425 x 300 mm | RIR FCO-3217C |
| Power Supply cables only | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ CP25WB+ Sealant Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600mm, each side) | -/180/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 425 x 300 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 116 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Power Supply cables only | Wall | 116 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/180/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3220F |
| Power Supply cables only | Wall | 100 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3220F |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|--|-----------|--|---------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Power Supply cables only | Wall | 100 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3220F |
| Single Power Supply cable | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Single Cables up to 20mm diameter Min 10 mm annular gap, Max opening 50 mm diameter | RIR FCO-3220F |
| Bundle of Power Cables | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 150 mm, each side) | -/120/120 | Cable Bundles up to 80mm diameter Min 15 mm annular gap | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Wall | 116 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Power Supply cables only | Wall | 116 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3219D |
| Power Supply cables only | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3219D |
| Power Supply cables only | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3219D |
| Single Power Supply cable | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Single Cables up to 20mm diameter Min 10 mm annular gap, Max opening 50 mm diameter | RIR FCO-3219D |
| Bundle of Power Cables | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 150 mm, each side) | -/120/120 | Cable Bundles up to 80mm diameter Min 15 mm annular gap | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|--|-----------|---|---------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Single Power Supply cable | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/120 | Single Cables up to 20mm diameter Max opening 800 x 600 mm | RIR FCO-3217C |
| Bundle of Power Cables | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 150mm, each side) | -/120/120 | Cable Bundles up to 80mm diameter Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Single Power Supply cable | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/120 | Single Cables up to 20mm diameter Max opening 800 x 600 mm | RIR FCO-3217C |
| Bundle of Power Cables | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 150mm, each side) | -/120/120 | Cable Bundles up to 80mm diameter Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 116 mm Plasterboard / Hollow Mansonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Plasterboard / Hollow Mansonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Fire Rated Plasterboard | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3220F |
| Power Supply cables only | Wall | 116 mm Plasterboard / Hollow Mansonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/180/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3220F |
| Power Supply cables only | Wall | 100 mm Plasterboard / Hollow Mansonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3220F |
| Power Supply cables only | Wall | 100 mm Plasterboard / Hollow Mansonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3220F |
| Single Power Supply cable | Wall | 100 mm Plasterboard / Hollow Mansonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Single Cables up to 20mm diameter Min 10 mm annular gap, Max opening 50 mm diameter | RIR FCO-3220F |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|--|-----------|--|---------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Bundle of Power Cables | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 150 mm, each side) | -/120/120 | Cable Bundles up to 80mm diameter Min 15 mm annular gap | RIR FCO-3220F |
| Mixture of Power Supply & Communication Cables | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Wall | 100 mm Fire Rated Plasterboard | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 250 x 140 mm | RIR FCO-3219D |
| Power Supply cables only | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/180/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3219D |
| Power Supply cables only | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3219D |
| Power Supply cables only | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1) Max opening 375 x 110 mm | RIR FCO-3219D |
| Single Power Supply cable | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/120 | Single Cables up to 20mm diameter Min 10 mm annular gap, Max opening 50 mm diameter | RIR FCO-3219D |
| Bundle of Power Cables | Wall | 100 mm Plasterboard / Hollow Mansory | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 150mm, each side)" | -/120/120 | Cable Bundles up to 80mm diameter Min 15 mm annular gap | RIR FCO-3219D |
| Mixture of Power Supply & Communication Cables | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300mm, each side)" | -/120/60 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Mixture of Power Supply & Communication Cables | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600mm, each side)" | -/120/120 | Cable Bundles , with or without Cable Trays (AS1530.4 Appendix D1 & D2) Max opening 800 x 600 mm | RIR FCO-3217C |
| Single Power Supply cable | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/120 | Single Cables up to 20mm diameter Max opening 800 x 600 mm | RIR FCO-3217C |
| Bundle of Power Cables | Wall | 116 mm Plasterboard / Hollow Mansory | 3M Fire Barrier Pillows with 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 150mm, each side) | -/120/120 | Cable Bundles up to 80mm diameter Max opening 800 x 600 mm | RIR FCO-3217C |

Section A – Fire Stopping Products/Solutions

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|--|-----------|--|---------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| uPVC Conduit empty | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Ultra GS Intumescent Strip 3M Foil Tape 425 3M Moldable Putty MP+ | -/120/120 | Single uPVC conduits up to 27mm diameter | RIR FCO-3220F |
| uPVC Conduit empty | Wall | 100 mm Concrete / Solid Masonry | 3M Ultra GS Intumescent Strip 3M Foil Tape 425 3M Moldable Putty MP+ | -/120/120 | Single PVC conduits up to 27mm diameter | RIR FCO-3220F |
| uPVC Conduit empty | Wall | 100 mm Plasterboard / Hollow Mansonry | "3M Ultra GS Intumescent Strip 3M Foil Tape 425 3M Moldable Putty MP+ | -/120/120 | Single uPVC conduits up to 27mm diameter | RIR FCO-3220F |
| uPVC Conduit with optic fibre | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Ultra GS Intumescent Strip 3M Foil Tape 425 3M Moldable Putty MP+ | -/120/120 | Single uPVC Conduits up to 27mm diameter (with up to 4 optic fibre cables) | RIR FCO-3220F |
| uPVC Conduit with optic fibre | Wall | 100 mm Concrete / Solid Masonry | 3M Ultra GS Intumescent Strip 3M Foil Tape 425 3M Moldable Putty MP+ | -/120/120 | Single uPVC Conduits up to 27mm diameter (with up to 4 optic fibre cables) | RIR FCO-3220F |
| uPVC Conduit with optic fibre | Wall | 100 mm Plasterboard / Hollow Mansonry | 3M Ultra GS Intumescent Strip 3M Foil Tape 425 3M Moldable Putty MP+ | -/120/120 | Single uPVC Conduits up to 27mm diameter (with up to 4 optic fibre cables) | RIR FCO-3220F |
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper pipes | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap | RIR FCO-3220F |
| Copper pipes | Floor | 120 mm Concrete | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/90 | Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap | RIR FCO-3220F |
| Copper pipes | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 15mm diameter x 0.91mm wall thickness Max opening 425 x 300 mm | RIR FCO-3217C |
| Copper pipes | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Up to 15mm diameter x 0.91mm wall thickness Max opening 425 x 300 mm | RIR FCO-3217C |
| Copper pipes | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Up to 15mm diameter x 0.91mm wall thickness Max opening 425 x 300 mm | RIR FCO-3217C |
| Steel pipes | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 34mm diameter x 3.5mm wall thickness Max opening 425 x 300 mm | RIR FCO-3217C |
| Steel pipes | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Up to 34mm diameter x 3.5mm wall thickness Max opening 425 x 300 mm | RIR FCO-3217C |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|---|-----------|--|---------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Steel pipes | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Up to 34mm diameter x 3.5mm wall thickness Max opening 425 x 300 mm | RIR FCO-3217C |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap | RIR FCO-3220F |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/90 | Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap | RIR FCO-3220F |
| Copper pipes | Wall | 100 mm Plasterboard / Hollow Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap | RIR FCO-3220F |
| Copper pipes | Wall | 100 mm Plasterboard / Hollow Masonry | 3M Moldable Putty MP+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/90 | Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap | RIR FCO-3220F |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap | RIR FCO-3219D |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | "3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/90 | "Up to 200mm diameter, 2.05 mm max wall thickness Max 10 mm annular gap" | RIR FCO-3219D |
| Copper pipes | Wall | 150 mm Plasterboard / Hollow Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | "Up to 200mm diameter, 2.05 mm max wall thickness Max 5 mm annular gap" | RIR FCO-3219D |
| Copper pipes | Wall | 150 mm Plasterboard / Hollow Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/90 | "Up to 200mm diameter, 2.05 mm max wall thickness Max 5 mm annular gap" | RIR FCO-3219D |
| Copper pipes | Wall | 116 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Up to 15mm diameter x 0.91mm wall thickness Max opening 65 mm diameter | RIR FCO-3219D |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 15mm diameter x 0.91mm wall thickness Max opening 65 mm diameter | RIR FCO-3219D |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | "3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Up to 15mm diameter x 0.91mm wall thickness Max opening 65 mm diameter | RIR FCO-3219D |
| Copper pipes | Wall | 150 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/240/30 | Up to 15mm diameter x 0.91mm wall thickness Max opening 65 mm diameter | RIR FCO-3219D |
| Copper pipes | Wall | 150 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/240/60 | Up to 15mm diameter x 0.91mm wall thickness Max opening 65 mm diameter | RIR FCO-3219D |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--------------------------------------|--|-----------|---|---------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Steel pipes | Wall | 116 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/120/30 | Up to 34 mm diameter, with 3.5 mm pipe wall thickness, up to 114 mm diameter pipe wall thickness, Max 35 mm annular gap | RIR FCO-3219D |
| Steel pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 34 mm diameter, with 3.5 mm pipe wall thickness, up to 114 mm diameter pipe wall thickness, Max 35 mm annular gap | RIR FCO-3219D |
| Steel pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Up to 34 mm diameter, with 3.5 mm pipe wall thickness, up to 114 mm diameter pipe wall thickness, Max 35 mm annular gap | RIR FCO-3219D |
| Steel pipes | Wall | 150 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. | -/240/30 | Up to 34 mm diameter, with 3.5 mm pipe wall thickness, up to 114 mm diameter pipe wall thickness, Max 35 mm annular gap | RIR FCO-3219D |
| Steel pipes | Wall | 150 mm Concrete / Solid Masonry | 3M Intumescent Sealant IC 15WB+ 100 kg/m3 Mineral Wool backing material. Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/240/120 | Up to 34 mm diameter, with 3.5 mm pipe wall thickness, up to 114 mm diameter pipe wall thickness, Max 35 mm annular gap | RIR FCO-3219D |
| Copper pipes | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/120/60 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/120/120 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|---|-----------|---|---------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | "Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Up to 15mm diameter x 0.91mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 300 mm, each side) | -/180/60 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ Fire Barrier Duct Wrap 615+ (Single Layer, Wrap length 600 mm, each side) | -/180/120 | Up to 34mm diameter x 3.5mm wall thickness Max opening 800 x 600 mm | RIR FCO-3217C |
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper pipes with Armaflex | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 15 mm diameter x 0.91 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 425 x 300 mm | RIR FCO-3217C |
| Steel pipes with Armaflex | Floor | 120 mm Concrete | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 34 mm diameter x 3.5 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 425 x 300 mm | RIR FCO-3217C |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|--|--|----------|---|---------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper pipes with Armaflex | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 15 mm diameter x 0.91 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes with Armaflex | Wall | 100 mm Concrete / Solid Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 34 mm diameter x 3.5 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes with Armaflex | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Up to 15 mm diameter x 0.91 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes with Armaflex | Wall | 116 mm Plasterboard / Hollow Masonry | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/120/30 | Up to 34 mm diameter x 3.5 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 800 x 600 mm | RIR FCO-3217C |
| Copper pipes with Armaflex | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 15 mm diameter x 0.91 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 800 x 600 mm | RIR FCO-3217C |
| Steel pipes with Armaflex | Wall | 75 mm Concrete / Solid Masonry / Hebel | 3M Fire Barrier Pillows 3M Moldable Putty MP+ | -/180/30 | Up to 34 mm diameter x 3.5 mm wall thickness, with 19 mm thick Armaflex through the seal, Max opening 800 x 600 mm | RIR FCO-3217C |

FIRESTOP CENTRE (DISTRIBUTOR OF PROTECTA BRAND)

Manufacturer Code: FC

657 Great South Rd
Penrose
AUCKLANDPh: 09 483 4000
Email: info@firestopcentre.co.nz
Website: www.firestopcentre.co.nz

The products listed in this register have all been tested to AS1530.4-2005 or Assessed to AS 4072.1-2005 as referenced within the New Zealand Building Code.

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|---------------------|-------------|---------------------------------------|--|-----------------|----------------------------------|-------------------------|
| BLANKS | | | | | | |
| Blank | Floor | Concrete or Aerated Concrete | 2 layers Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | -/180/120 | Max opening 2400mm x 1200mm | Exova EWFA 51478400-A.1 |
| Blank | Floor | Concrete or Aerated Concrete | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | -/120/90 | Max opening 2400mm x 1200mm | Exova EWFA 51478400-A.1 |
| Blank | Wall | Concrete, Aerated Concrete or Masonry | 2 layers Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | -/240/180 | Unlimited width, Max 1200mm high | Exova EWFA 51478400-A.1 |
| Blank | Wall | Concrete, Aerated Concrete or Masonry | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | -/240/90 | Unlimited width, Max 1200mm high | Exova EWFA 51478400-A.1 |
| Blank | Wall/Roof | Plasterboard or Concrete/AC/Masonry | 1 layer Protecta FR Board 60mm double-sided friction fitted between top of wall and substrate above. | -/240/90 | Unlimited width, Max 1200mm high | Exova EWFA 51478400-A.1 |
| Blank | Wall | Plasterboard | Protecta FR Board 50mm single-sided flush with plasterboard each side of wall. | -/120/120 | Unlimited width, Max 1200mm high | Exova EWFA 51478400-A.1 |
| Blank | Wall | Plasterboard 13mm Single-layer | Protecta FR Acrylic Sealant 12.5mm each side, no backing required | -60/60 | Up to 150x150mm | Exova EWFA 53619700-B.1 |
| Blank | Wall | Plasterboard 13mm Double-layer | Protecta FR Acrylic Sealant 12.5mm each side with stone wool backing | -120/120 | Up to 300x300mm | Exova EWFA 53619700-B.1 |
| Blank | Floor | Concrete or Aerated Concrete | Protecta FR Acrylic Sealant 25mm top only or 15mm top and bottom with stone wool backing | Up to -/240/240 | Up to 300x300mm | Exova EWFA 53619700-B.1 |
| Blank | Floor | Concrete or Aerated Concrete | Protecta EX Mortar 50mm, backed with 50mm stone wool | -180/180 | Up to 2400x1200mm | Exova EWFA 53619700-C.3 |
| Blank | Floor | Concrete or Aerated Concrete | Protecta EX Mortar 100mm | -240/240 | Up to 2400x1200mm | Exova EWFA 53619700-C.3 |
| Blank | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 50mm, backed with 50mm stone wool | -180/120 | Up to 2400x1200mm | Exova EWFA 53619700-C.3 |
| Blank | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 100mm | -240/240 | Up to 2400x1200mm | Exova EWFA 53619700-C.3 |
| Blank | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Board 60mm to each side of the wall, pattern fitted | -240/180 | Up to 600x600mm | Exova EWFA 51478400-A.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|----------------------------------|-------------|---|--|-----------------|--|-------------------------|
| NON-INSULATED METAL PIPES | | | | | | |
| Steel | Wall | Plasterboard | Protecta FR Board 50mm single-sided flush with plasterboard each side of wall. | Up to -/120/60 | Up to 114mm diam | Exova EWFA 51478400-A.1 |
| Steel | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic Sealant 15mm both sides | -/240/- | Up to 219mm diam | Exova EWFA 53619700-B.1 |
| Steel, Copper or Alupex | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic Sealant 25mm one side only | Up to -/240/- | Steel to 219mm, Copper to 54mm, Alupex to 75mm | Exova EWFA 53619700-B.1 |
| Steel | Wall | Plasterboard 13mm single-layer | Protecta FR Acrylic Sealant 25mm one side only | -/60/30 | Up to 22mm diam | Exova EWFA 53619700-B.1 |
| Steel, Copper or Alupex | Wall | Plasterboard | Protecta FR Acrylic Sealant 12.5mm each side | Up to -/120/- | Steel to 219mm, Copper to 54mm, Alupex to 75mm | Exova EWFA 53619700-B.1 |
| Steel or Copper | Floor | Concrete or Aerated Concrete from 60mm | Protecta FR Acrylic Sealant 15-25mm one side only | Up to -/240/120 | Steel to 219mm, Copper to 54mm | Exova EWFA 53619700-B.1 |
| Steel or Copper | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Acrylic Sealant 25mm both sides | Up to -/240/240 | Steel to 219mm, Copper to 54mm | Exova EWFA 53619700-B.1 |
| Steel or Copper | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 50mm, backed with 50mm stone wool | Up to -/180/180 | Steel to 219mm, Copper to 15mm | Exova EWFA 53619700-C.3 |
| Steel | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 100mm | Up to -/240/- | Steel to 219mm | Exova EWFA 53619700-C.3 |
| Steel | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 50mm, backed with 50mm stone wool | -/120/- | Steel to 219mm | Exova EWFA 53619700-C.3 |
| Steel | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 100mm | -/240/- | Steel to 219mm | Exova EWFA 53619700-C.3 |
| Steel, Copper, Ferrous | Wall | Plasterboard | 3M CP 25WB+ Sealant with 3M E-5A-4 Endothermic Mat for insulation rating | Up to -/120/120 | Steel to 114mm, Copper / Ferrous to 15mm | Exova RIR 23263-01 |
| Steel, Copper, Ferrous | Wall | Concrete, Aerated Concrete or Masonry | 3M CP 25WB+ Sealant with 3M E-5A-4 Endothermic Mat for insulation rating | Up to -/240/120 | Steel to 114mm, Copper / Ferrous to 15mm | Exova RIR 23263-01 |
| Steel or Copper | Wall | Concrete, Aerated Concrete or Masonry | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | -/240/- | Steel to 325mm, Copper to 54mm | Exova EWFA 51478400-A.1 |
| Steel, Copper or Alupex | Wall | Plasterboard or Concrete | Protecta FR Putty Cord fillet each side of wall (annular space can be zero) | Up to -/120/120 | Steel to 30mm, Copper to 12mm, Alupex to 20mm | Exova EWFA 53619700-A.4 |
| Steel or Copper | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Putty Cord fillet to bottom side of floor only (annular space can be zero) | Up to -/120/120 | Steel to 30mm, Copper to 12mm | Exova EWFA 53619700-A.4 |
| Steel or Copper | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Putty Cord fillet to top side of floor only (annular space can be zero) | Up to -/120/120 | Steel to 22mm, Copper to 10mm | Exova EWFA 53619700-A.4 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|---|-------------|---|--|--------------------|--|----------------------------|
| INSULATED METAL PIPES | | | | | | |
| Steel (Interrupted Insulation) | Wall | Concrete, Aerated Concrete or Masonry | 2 layers Protecta FR Board 60mm double-sided | Up to -/240/180 | Up to 219mm diam | Exova EWFA 51478400-A.1 |
| Steel or Copper (Continuous or Interrupted) | Wall | Concrete, Aerated Concrete or Masonry | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | Up to -/240/240 | Steel to 324mm, Copper to 54mm | Exova EWFA 51478400-A.1 |
| Steel (Interrupted) | Floor | Concrete or Aerated Concrete from 120mm | 2 layers Protecta FR Board 60mm double-sided | -/180/60 | Up to 219mm diam | Exova EWFA 51478400-A.1 |
| Steel or Copper (Interrupted) | Floor | Concrete or Aerated Concrete from 60mm | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | Up to -/120/120 | Steel to 219mm, Copper to 54mm | Exova EWFA 51478400-A.1 |
| Steel, copper (Continuous, Combustible) | Wall | Plasterboard | Protecta FR Board 50mm single-sided each side of wall, with Protecta FR Pipe Wrap. | Up to -/120/120 | Up to 324mm diam | Exova EWFA 51478400-A.1 |
| Steel (Continuous) | Wall | Plasterboard | Protecta FR Board 50mm single-sided flush with plasterboard each side of wall. | -/120/120 | Up to 324mm diam | Exova EWFA 51478400-A.1 |
| Steel or Alupex (Interrupted) | Wall | Plasterboard | Protecta FR Board 50mm single-sided flush with plasterboard each side of wall. | Up to -/120/120 | Steel to 219mm, Alupex to 75mm | Exova EWFA 51478400-A.1 |
| Steel, Copper or Alupex (Interrupted) | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic Sealant 25mm one side only | Up to -/240/240 | Steel to 219mm, Copper to 54mm, Alupex to 75mm | Exova EWFA 53619700-B.1 |
| Steel (Continuous) | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic Sealant 25mm one side only | -/180/180 | Up to 324mm diam | Exova EWFA 53619700-B.1 |
| Steel (Interrupted) | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic Sealant 15mm both sides | -/240/120 | Up to 219mm diam | Exova EWFA 53619700-B.1 |
| Steel (Continuous) | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic Sealant 15mm both sides | -/240/240 | Up to 324mm diam | Exova EWFA 53619700-B.1 |
| Steel (Continuous, Combustible) | Wall | Concrete, Aerated Concrete from 100mm | Protecta FR Acrylic Sealant 25mm both sides | Up to -/240/180 | Up to 114mm diam | Exova EWFA 53619700-B.1 |
| Steel (Continuous) | Wall | Plasterboard | Protecta FR Acrylic Sealant 12.5mm both sides | -/120/90 | Steel to 324mm | Exova EWFA 53619700-B.1 |
| Steel, Copper or Alupex (Interrupted) | Wall | Plasterboard | Protecta FR Acrylic Sealant 12.5mm both sides | Up to -/120/120 | Steel to 219mm, Copper to 54mm, Alupex to 75mm | Exova EWFA 53619700-B.1 |
| Steel or Copper (Interrupted) | Floor | Concrete or Aerated Concrete from 60mm | Protecta FR Acrylic Sealant 15-25mm one side only | Up to -/240/180 | Steel to 219mm, Copper to 54mm | Exova EWFA 53619700-B.1 |
| Steel (Continuous) | Floor | Concrete or Aerated Concrete from 60mm | Protecta FR Acrylic Sealant 25mm top side only | -/240/240 | Up to 324mm diam | Exova EWFA 53619700-B.1 |
| Steel (Continuous, Combustible) | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Acrylic Sealant 25mm both sides | -/60/60 | Up to 165mm diam | Exova EWFA 53619700-B.1 |
| Steel (Interrupted) | Floor | Concrete or Aerated Concrete from 70mm | Protecta FR Acrylic Sealant 15mm both sides | -/240/120 | Up to 219mm diam | Exova EWFA 53619700-B.1 |
| Steel (Interrupted) | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 50mm, backed with 50mm stone wool | -/180/90 | Up to 219mm diam | Exova EWFA 53619700-C.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|---|-------------|---|---|--------------------|--|----------------------------|
| INSULATED METAL PIPES | | | | | | |
| Steel (Continuous) | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 50mm, backed with 50mm stone wool | Up to -/240/240 | Up to 324mm diam | Exova EWFA 53619700-C.3 |
| Steel (Interrupted) | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 100mm | Up to -/240/240 | Up to 219mm diam | Exova EWFA 53619700-C.3 |
| Steel (Combustible insulation) | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 100mm with Protecta FR Pipe Wrap | Up to -/240/120 | Up to 324mm diam | Exova EWFA 53619700-C.3 |
| Steel (Continuous) | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 50mm, backed with 50mm stone wool | -/120/90 | Up to 219mm diam | Exova EWFA 53619700-C.3 |
| Steel (Interrupted) | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 50mm, backed with 50mm stone wool | Up to -/180/120 | Up to 219mm diam | Exova EWFA 53619700-C.3 |
| Steel (Continuous, Combustible) | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 100mm with Protecta FR Pipe Wrap | Up to -/240/60 | Up to 165mm diam | Exova EWFA 53619700-C.3 |
| Steel (Interrupted) | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 100mm | Up to -/240/240 | Up to 219mm diam | Exova EWFA 53619700-C.3 |
| Steel (Continuous, Combustible) | Wall | Plasterboard | Protecta EX Mortar 50mm with 2 layers Protecta FR Pipe Wrap each side | -/120/60 | Up to 165mm diam | Exova EWFA 53619700-C.3 |
| Steel or Alupex (Interrupted) | Wall | Plasterboard | Protecta EX Mortar 25mm each side, with stone wool backing | Up to -/120/90 | Steel to 219mm, Alupex to 75mm | Exova EWFA 53619700-C.3 |
| Steel (Continuous Insulation) | Wall | Concrete, Aerated Concrete or Masonry | 2 layers Protecta FR Board 60mm double-sided | Up to -/240/180 | Up to 324mm diam | Exova EWFA 51478400-A.1 |
| Steel or Copper (Interrupted) | Wall | Plasterboard or Concrete | Protecta FR Putty Cord fillet each side of wall (annular space can be zero) | Up to -/120/120 | Steel to 324mm, Copper to 54mm | Exova EWFA 53619700-A.4 |
| Steel or Copper (Continuous Insulation) | Wall | Plasterboard or Concrete | Protecta FR Putty Cord fillet each side of wall (annular space can be zero) | Up to -/120/120 | Steel to 324mm, Copper to 54mm | Exova EWFA 53619700-A.4 |
| Steel or Copper (Interrupted) | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Putty Cord fillet to top side of floor only (annular space can be zero) | Up to -/240/240 | Steel to 324mm, Copper to 54mm | Exova EWFA 53619700-A.4 |
| Steel or Copper (Continuous Insulation) | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Putty Cord fillet to top side of floor only (annular space can be zero) | Up to -/240/240 | Steel to 324mm, Copper to 54mm | Exova EWFA 53619700-A.4 |
| Steel (Continuous, Combustible) | Wall | Concrete or Aerated Concrete from 100mm | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture, with wrap. | -/120/45 | Steel to 165mm | Exova EWFA 51478400-A.1 |
| Steel, Copper or Alupex (Combustible) | Wall | Plasterboard | Protecta FR Acrylic Sealant 25mm both sides | Up to -/120/120 | Steel to 165mm, Copper to 54mm, Alupex to 75mm | Exova EWFA 53619700-B.1 |
| PLASTIC PIPES | | | | | | |
| PVC, PE, PP Pipes | Wall | Plasterboard | Collar to each side of wall | Up to -/90/60 | Up to 160mm diam | Exova EWFA 51478400-B.1 |
| PVC, PE, PP Pipes | Wall | Concrete, Aerated Concrete or Masonry | Collar to each side of wall | Up to -/240/240 | Up to 160mm diam | Exova EWFA 51478400-B.1 |
| PVC, PE, PP Pipes | Floor | Concrete or Aerated Concrete from 60mm | Collar to underside of floor | Up to -/90/60 | Up to 160mm diam | Exova EWFA 51478400-B.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|---|-------------|---|---|-----------------|--|-------------------------|
| PLASTIC PIPES | | | | | | |
| PVC, PE, PP Pipes | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic Sealant 25mm both sides | Up to -/240/240 | Up to 32mm diam | Exova EWFA 53619700-B.1 |
| PVC, PE, PP Pipes | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 100mm with Protecta FR Pipe Wrap | Up to -/240/240 | Up to 250mm diam | Exova EWFA 53619700-C.3 |
| PEX Pipes | Wall | Plasterboard or Concrete | 3M 3000WT Sealant 26mm to both sides with 25mm fillet | -180/120 | Up to 25mm diam | Exova RIR 45239800.1 |
| PVC Pipes | Floor | Concrete or Aerated Concrete from 75mm | 3M Tuck-In Wrap Strips | Up to -/180/180 | Up to 160mm diam | BRANZ FAR 4568 |
| PVC Pipes | Wall | Plasterboard or Concrete | 3M Tuck-In Wrap Strips | Up to -/120/120 | Up to 110mm diam | BRANZ FAR 4568 |
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables - single, bundled, trays, conduits | Wall | Concrete, Aerated Concrete or Masonry | 2 layers Protecta FR Board 60mm double-sided | Up to -/180/120 | Cables to 80mm, Bundles to 100mm | Exova EWFA 51478400-A.1 |
| Cables - single, bundled, trays, conduits | Floor | Concrete or Aerated Concrete from 120mm | 2 layers Protecta FR Board 60mm double-sided | Up to -/120/120 | Cables to 80mm, Bundles to 100mm | Exova EWFA 51478400-A.1 |
| Cables - single, bundled, trays, conduits | Floor | Concrete or Aerated Concrete from 60mm | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | Up to -/90/45 | Cables to 80mm, Bundles to 100mm | Exova EWFA 51478400-A.1 |
| Cables - single, bundled, trays, conduits | Wall | Plasterboard | 1 layer Protecta FR Board 50mm single-sided flush with plasterboard each side of wall | -/60/60 | Cables single or bundled to 80mm | Exova EWFA 51478400-A.1 |
| Cables - single | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic to one side of wall or anywhere inbetween | Up to -/240/120 | Single cable up to 21mm | Exova EWFA 53619700-B.1 |
| Cables - single or bundled | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Acrylic to both sides of wall | Up to -/240/240 | Cables to 80mm, Bundles to 100mm | Exova EWFA 53619700-B.1 |
| Cables - single or bundled | Wall | Plasterboard from single-layer 13mm | Protecta FR Acrylic Sealant to each side of wall | Up to -/60/45 | Cables to 21mm, Bundles to 100mm | Exova EWFA 53619700-B.1 |
| Cables - single or bundled | Wall | Plasterboard | Protecta FR Acrylic Sealant to each side of wall | Up to -/120/120 | Cables to 80mm, Bundles to 100mm | Exova EWFA 53619700-B.1 |
| Cables - single or bundled | Floor | Concrete or Aerated Concrete from 60mm | Protecta FR Acrylic Sealant 15mm to top and bottom of floor | Up to -/120/120 | Single or bundled cables up to 80mm diam | Exova EWFA 53619700-B.1 |
| Cables - single or bundled | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 50mm, backed with 50mm stone wool | Up to -/180/180 | Single or bundled cables up to 21mm diam, conduits | Exova EWFA 53619700-C.3 |
| Cables - single or bundled | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 100mm | Up to -/180/180 | Single or bundled cables up to 80mm diam, conduits | Exova EWFA 53619700-C.3 |
| Cables - trays | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 50mm, backed with 50mm stone wool | -/90/60 | Single or bundled cables up to 21mm diam, conduits | Exova EWFA 53619700-C.3 |
| Cables - trays | Floor | Concrete or Aerated Concrete from 100mm | Protecta EX Mortar 100mm | -/120/60 | Single or bundled cables up to 80mm diam, conduits | Exova EWFA 53619700-C.3 |
| Cables - single or bundled, conduits | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 50mm, backed with 50mm stone wool | Up to -/180/90 | Single or bundled cables up to 21mm diam, conduits | Exova EWFA 53619700-C.3 |
| Cables - trays | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 50mm, backed with 50mm stone wool | -/180/60 | Single or bundled cables up to 21mm diam, conduits | Exova EWFA 53619700-C.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|--|-------------|---|--|-----------------|--|--------------------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables - single or bundled, conduits | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 100mm | Up to -/240/240 | Single or bundled cables up to 80mm diam, conduits | Exova EWFA 53619700-C.3 |
| Cables - trays | Wall | Concrete, Aerated Concrete or Masonry | Protecta EX Mortar 100mm | -/120/60 | Single or bundled cables up to 80mm diam | Exova EWFA 53619700-C.3 |
| Cables - single, bundles, trays, conduits | Wall | Plasterboard | Protecta EX Mortar 25mm each side, backed with mineral wool | Up to -/120/120 | Single or bundled cables up to 80mm diam, conduits | Exova EWFA 53619700-C.3 |
| Conduit | Wall | Plasterboard | 3M IC 15WB+ Sealant 26mm each side | Up to -/180/90 | Conduits up to 26mm | Exova RIR 45239800a.1 |
| Cables - single | Wall | Plasterboard | Protecta FR Putty Cord to both sides of wall | Up to -/120/120 | Single cables up to 80mm diam | Exova EWFA 53619700-A.4 |
| Cables - bundles | Wall | Plasterboard | Protecta FR Putty Cord to both sides of wall | Up to -/120/120 | Cable bundles up to 50mm | Exova EWFA 53619700-A.4 |
| Conduit, empty or up to 4 fibre optic cables | Wall | Plasterboard, concrete, masonry or AAC | 3M Ultra GS Wrap and 3M Mouldable Putty both sides of wall | -/120/120 | Conduits up to 26mm | CSIRO FCO-3220 |
| Cables D1 and D2 including cable trays | Wall | Plasterboard, concrete or masonry | 3M CP 25WB+ Sealant with 3M E-5A-4 Endothermic Mat for insulation rating | Up to -/120/120 | All D1 and D2 cables, including trays | Exova RIR 23263-01 |
| Cables D1 and D2 including cable trays | Floor | Concrete or Aerated Concrete from 120mm | 3M CP 25WB+ Sealant with 3M E-5A-4 Endothermic Mat for insulation rating | Up to -/180/120 | All D1 and D2 cables, including trays | Exova RIR 23263-01 |
| Cables - single | Wall | Concrete, Aerated Concrete or Masonry | 1 layer Protecta FR Board 60mm double-sided positioned anywhere in the aperture. | -/240/90 | Single cable up to 21mm | Exova EWFA 51478400-A.1 |
| Cables - bundles - and Conduits | Wall | Concrete, Aerated Concrete or Masonry | 2 layers Protecta FR Board 60mm double-sided | Up to -/180/180 | Single or bundled cables up to 80mm diam, conduits | Exova EWFA 51478400-A.1 |
| Cables - single, bundled, trays, conduits | Wall | Concrete, Aerated Concrete or Masonry | Protecta FR Board 60mm to each side of the wall, pattress fitted | Up to -/240/180 | Single or bundled cables up to 80mm diam | Exova EWFA 51478400-A.1 |
| Cables - single or bundled | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Putty Cord to top of floor only | Up to -/120/120 | Single or bundled cables up to 50mm diam | Exova EWFA 53619700-A.4 |
| Cables - single or bundled | Floor | Concrete or Aerated Concrete from 100mm | Protecta FR Putty Cord to bottom of floor only | Up to -/120/60 | Single or bundled cables up to 75mm diam | Exova EWFA 53619700-A.4 |
| SEISMIC/CONSTRUCTION JOINTS | | | | | | |
| Floor joints or Floor to Wall gaps | Floor | Concrete or Aerated Concrete from 64mm | Protecta FR IPT Sealant 15mm top and bottom of floor | Up to -/240/240 | Gaps/Joints up to 30mm | UL Assessment 4788415167 |
| Floor joints or Floor to Wall gaps | Floor | Concrete or Aerated Concrete from 64mm | Protecta FR IPT Sealant 25mm at any position within floor | Up to -/240/180 | Gaps/Joints up to 30mm | UL Assessment 4788415167 |
| Wall joints or Top of Wall to Floor above | Wall | Concrete, Aerated Concrete or Masonry from 64mm | Protecta FR IPT Sealant 12.5mm each side of wall | Up to -/120/120 | Gaps/Joints up to 30mm | UL Assessment 4788415167 |
| Wall joints or Top of Wall to Floor above | Wall | Plasterboard from 13mm Single-layer | Protecta FR IPT Sealant 12.5mm each side of wall | Up to -/120/120 | Gaps/Joints up to 30mm | UL Assessment 4788415167 |
| Floor joints or Floor to Wall gaps | Floor | Concrete or Aerated Concrete from 64mm | Protecta FR ASF Sealant 25mm to top face of floor | Up to -/120/120 | Gaps/Joints up to 100mm | UL Assessment 4787654631 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|---|-------------|--|--|-----------------|-------------------------------|--------------------------|
| SEISMIC/CONSTRUCTION JOINTS | | | | | | |
| Wall joints or Top of Wall to Floor above | Wall | Concrete, Aerated Concrete or Masonry from 90mm | Protecta FR ASF Sealant to each side of wall | Up to -/120/120 | Gaps/Joints up to 30mm | UL Assessment 4787654631 |
| Wall joints or Top of Wall to Floor above | Wall | Plasterboard from 10mm Single-layer | Protecta FR ASF Sealant to each side of wall | Up to -/120/120 | Gaps/Joints up to 30mm | UL Assessment 4787654631 |
| Wall joints or Top of Wall to Floor above | Wall | Concrete, Aerated Concrete or Masonry from 75mm | Protecta FR Acrylic Sealant to each side of wall or one side only | Up to -/240/240 | Gaps/Joints up to 50mm | Exova EWFA 53619700-B.1 |
| Wall joints or Top of Wall to Floor above | Wall | Plasterboard from 13mm Single-layer | Protecta FR Acrylic Sealant to each side of wall | Up to -/120/120 | Gaps/Joints up to 30mm | Exova EWFA 53619700-B.1 |
| HVAC | | | | | | |
| Ducts, Horizontal or Vertical | N/A | Open spaces or through any non fire-rated construction | 3M Duct Wrap 615+ Single Layer | 120/120/120 | Ducts up to 1250 x 1000mm | BRANZ FAR4812 |
| Ducts, Internal or External Fire | Wall | Plasterboard or Concrete | 3M Duct Wrap 615+ Single Layer | 120/120/120 | Ducts up to 1250 x 1000mm | CSIRO FCO-3273 |
| Ducts, Internal or External Fire | Floor | Concrete | 3M Duct Wrap 615+ Single Layer | 120/120/120 | Ducts up to 1250 x 1000mm | BRANZ FAR4812 |
| HATCHES | | | | | | |
| Inspection Hatch | Ceiling | Plasterboard from single layer 13mm | FSC Fire-rated Inspection Hatch - no framing required. All ceilings up to 60mins | Up to 60/60/60 | 300mm x 300mm | BRANZ FAR4709 |
| FLUSH BOXES / SOCKET BOXES | | | | | | |
| Flush boxes - single or back-to-back | Wall | Plasterboard from single layer 13mm | Protecta FR Putty Pad fitted to interior of box | Up to -/90/90 | Up to double box 130mm x 70mm | Exova EWFA 53619700-A.2 |

HILTI NEW ZEALAND LTD

Manufacturer Code: HI

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600 Great South Road,
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The products listed in this register have all been tested to AS1530.4-2005 or Assessed to AS 4072.1-2005 as referenced within the New Zealand Building Code.

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|---|--------------------------------|
| BLANK OPENING | | | | | | |
| 40mm x 40mm Square Blank Opening, no services | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backlifting material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| 150mm x 150mm Square Blank Opening, no services | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backlifting material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Blank opening: max. 150mm x 150mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Blank seal / Empty Speed sleeve | Wall | Plaster Board Wall; lined with min. 2 x 16mm Fire Rated Plasterboard on each side of stud | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening Size: 63 -76mm OD Annular Seal Depth min. 20mm. (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank seal / Empty Speed sleeve | Wall | Plaster Board Wall; lined with min. 2 x 13mm Fire Rated Plasterboard on each side of stud | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/60 | Opening Size: 63 -76mm OD Annular Seal Depth min. 20mm. (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank seal / Empty Speed sleeve | Wall | Plaster Board Wall; lined with min. 2 x 16mm Fire Rated Plasterboard on each side of stud | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening Size: 113 -122mm OD Annular Seal Depth min. 20mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank seal / Empty Speed sleeve | Wall | Plaster Board Wall; lined with min. 2 x 13mm Fire Rated Plasterboard on each side of stud | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/60 | Opening Size: 113 -122mm OD Annular Seal Depth min. 20mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank Opening, no services | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL | -/120/120 | Blank opening size: 52mm ≤ Ø ≤ 202mm with or without uPVC conduit sleeve Min. seal thickness: 150mm Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 27937400 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|---------------------|
| BLANK OPENING | | | | | | |
| Blank Opening, no services | Wall | Plaster Board Wall; ; lined with min. 1 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC | -/60/60 | Min. seal thickness: 200mm Max. blank opening size: 108mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Blank Opening, no services | Wall | Plaster Board Wall; ; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC | -/120/120 | Min. seal thickness: 200mm Max. blank opening size: 108mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Blank Opening | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX | -/120/120 | Max. opening area: 400mm x 400mm or equivalent surface area of 0.16m2 or max. diameter ≤ 400mm Min. seal thickness: 150mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Blank Opening | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth If necessary, Aperture Beading: 13mm or 16mm Fire Grade Plasterboard each side of stud | -/120/120 | Max. opening area: 400mm x 400mm or equivalent surface area of 0.16m2 or max. diameter ≤ 400mm Min. seal thickness: 150mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Blank Opening, no services | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL If necessary, Aperture Beading: 13mm or 16mm Fire Grade Plasterboard each side of stud | -/120/120 | Max. opening size: 1000mm x 1000mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) OR Aperture lined with Fire Rated Plasterboard each side of stud as required. Min. seal thickness: 200mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| 40mm x 40mm Square Blank Opening, no services | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| 40mm x 40mm Square Blank Opening, no services | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size. Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| 150mm x 150mm Square Blank Opening, no services | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Blank opening: max. 150mm x 150mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|--------------------------------|
| BLANK OPENING | | | | | | |
| 150mm x 150mm Square Blank Opening, no services | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backfilling material: Mineral wool (Tightly compressed, Min. Thickness 100mm.) | -/120/120 | Blank opening: max. 150mm x 150mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Blank seal / Empty Speed sleeve | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening Size: 63 -76mm OD Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank seal / Empty Speed sleeve | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening Size: 113 -122mm OD Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank Opening, no services | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL | -/120/120 | Blank opening size: 52mm ≤ Ø ≤ 202mm with or without uPVC conduit sleeve. Min. seal thickness: 150mm Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m ³ (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Blank Opening, no services | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC | -/120/120 | Min. seal thickness: 200mm Max. blank opening size: 108mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Blank Opening | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX | -/120/120 | Max. opening area: 400mm x 400mm or equivalent surface area of 0.16m ² or max. diameter ≤ 400mm Min. seal thickness: 150mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Blank Opening, no services | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL | -/120/120 | Max. opening size: 1000mm x 1000mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) OR Aperture lined with Fire Rated Plasterboard each side of stud as required. Min. seal thickness: 200mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| 150mm x 150mm Square Blank Opening, no services | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Backfilling material: Mineral wool (Tightly compressed, Min. Thickness 95mm.) | -/120/120 | Blank opening: max. 150mm x 150mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| 150mm x 150mm Square Blank Opening, no services | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Backfilling material: Mineral wool (Tightly compressed, Min. Thickness 125mm.) | -/120/120 | Blank opening: max. 150mm x 150mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--------------------------------|-------------|--|--|-----------|--|--------------------------------|
| BLANK OPENING | | | | | | |
| Blank seal / Empty sleeve | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening Size: 63 -76mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank seal / Empty sleeve | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening Size: 113 -122mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank seal / Empty sleeve | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening Size: 113 -122mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Blank Opening | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Blank Opening, no services | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL | -/120/120 | Min. seal thickness: 150mm Blank opening size: 52mm ≤ Ø ≤ 202mm, with or without uPVC conduit sleeve (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Blank Opening, no services | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side | -/120/120 | Max. blank opening size: 108mm Min. seal thickness: 250mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Blank Opening, no services | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only | -/120/120 | Max. blank opening size: 108mm Min. seal thickness: 250mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side Gap fully filled with Hilti Mortar CP 633 in the upper part of the collar (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Blank Opening | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Max. opening area: 400mm x 400mm or equivalent surface area of 0.16m ² or max. diameter ≤ 400mm Min. seal thickness: 150mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Blank Opening without support | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL | -/120/60 | Max. opening size: 1000mm x 700mm Min. seal thickness: 200mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Blank Opening, without Support | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL | -/120/120 | Max. opening size: 500mm x 700mm Min. seal thickness: 200mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|--|-------------------|
| BLANK OPENING | | | | | | |
| Blank Opening with support | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL | -/120/120 | Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm x 1.42mm (min.) Ø125-150mm x 1.63mm (min.) | Wall | 4hr Rigid Wall; 230mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 230mm (Including Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/240/- | Annular gap width: 5mm to 20mm Min. seal thickness: 230mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm x 0.91mm (min.) Ø80-100mm x 1.22mm (min.) | Wall | 4hr Rigid Wall; 230mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 230mm (Including Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/240/- | Annular gap width: 5mm to 20mm Min. seal thickness: 230mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm x 0.91mm (min.) Ø80-100mm x 1.22mm (min.) | Wall | 4hr Rigid Wall; 230mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 230mm (Including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/240/120 | Annular gap width: 5mm to 20mm Min. seal thickness: 230mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm x 1.42mm (min.) Ø125-150mm x 1.63mm (min.) | Wall | 4hr Rigid Wall; 230mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 230mm (Including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/240/120 | Annular gap width: 5mm to 20mm Min. seal thickness: 230mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm x 0.91mm (min.) Ø80-100mm x 1.22mm (min.) | Wall | 2hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (Including Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/120/- | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm x 1.42mm (min.) Ø125-150mm x 1.63mm (min.) | Wall | 2hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (Including Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/120/- | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm x 0.91mm (min.) Ø80-100mm x 1.22mm (min.) | Wall | 2hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (Including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/120/120 | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|--|-------------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 2hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (Including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/120/120 | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 2hr Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 100mm (Including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/120/120 | Annular gap width: 5mm to 20mm Min. seal thickness: 100mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 2hr Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 100mm (Including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/120/120 | Annular gap width: 5mm to 20mm Min. seal thickness: 100mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1.5hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/90/- | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1.5hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/90/- | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1.5hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1.5hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1.5hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Min. seal thickness: 100mm Min. depth of sealant: 20mm Annular gap width: 5mm to 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1.5hr Rigid Wall; 150mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Annular gap width: 5mm to 20mm Min. seal thickness: 100mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|---------|--|-------------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1hr Rigid Wall; 75mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/60/- | Min. seal thickness: 75mm Min. depth of sealant: 20mm Annular gap width: 5mm to 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1hr Rigid Wall; 75mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/60/- | Annular gap width: 5mm to 20mm Min. seal thickness: 75mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1hr Rigid Wall; 75mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/60/60 | Annular gap width: 5mm to 20mm Min. seal thickness: 75mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1hr Rigid Wall; 75mm Thick Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/60/60 | Annular gap width: 5mm to 20mm Min. seal thickness: 75mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1.5hr Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/90/- | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1.5hr Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/90/- | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1.5hr Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1.5hr Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 150mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Annular gap width: 5mm to 20mm Min. seal thickness: 150mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1.5hr Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Annular gap width: 5mm to 20mm Min. seal thickness: 100mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|---------|---|-------------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1.5hr Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/90/90 | Annular gap width: 5mm to 20mm Min. seal thickness: 100mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) | Wall | 1h Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 75mm (Including Aperture Beading)) | Hilti CP 606 sealant + PE foam backing rod | -/60/- | Annular gap width: 5mm to 20mm Min. seal thickness: 75mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1h Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 75mm Including Aperture Beading) | Hilti CP 606 sealant + PE foam backing rod | -/60/- | Annular gap width: 5mm to 20mm Min. seal thickness: 75mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper, Ferrous or Brass pipes Up to Ø65mm × 0.91mm (min.) Ø80-100mm × 1.22mm (min.) " | Wall | 1h Plaster Board Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 75mm (including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/60/60 | Annular gap width: 5mm to 20mm Min. seal thickness: 75mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| Copper or Ferrous (steel and iron) pipes Ø100-125mm × 1.42mm (min.) Ø125-150mm × 1.63mm (min.) | Wall | 1h Flexible Wall; lined with min. 2 x 13mm or min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 75mm (Including Aperture Beading)) | Hilti CP 606 Acrylic Sealant + PE foam backing rod + Protective insulation: 38mm or 50mm Bradford Fibertex 450 Rockwool for 600mm each side of the wall. Note: Insulation should not be sustained through the wall opening. | -/60/60 | Annular gap width: 5mm to 20mm Min. seal thickness: 75mm Min. depth of sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28418-02 |
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Ø22mm × 1mm Copper Pipe, insulated with 20mm thick Stonewool | Wall | 1hr Plaster Board Wall; lined with min. 1 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm (+ Aperture Beading)) | "Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A Insulation: 20mm thick Rockwool RS800 continuous through the seal with 200mm extension on each side " | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side. For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details)" | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|--|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Ø22mm × 1mm Copper Pipe, insulated with 20mm thick Stonewool | Wall | 2hr Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A Insulation: 20mm thick Rockwool RS800 continuous through the seal with 200mm extension on each side | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side. For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Ø22mm × 1mm Copper Pipe, insulated with 20mm thick Stonewool | Wall | 2hr Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A Insulation: 20mm thick Rockwool RS800 continuous through the seal with 200mm extension on each side | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side. For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Ø22mm × 1mm Copper Pipe, insulated with 20mm thick Stonewool | Wall | 2hr Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | "Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A Insulation: 20mm thick Rockwool RS800 continuous through the seal with 200mm extension on each side " | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side. For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Ø22mm × 1mm Copper Pipe, insulated with 20mm thick Stonewool | Floor | 2hr Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A Insulation: 20mm thick Rockwool RS800 continuous through the seal with 200mm extension on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Ø22mm × 1mm Copper Pipe, insulated with 20mm thick Stonewool | Floor | 2hr Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only Insulation: 20mm thick Rockwool RS800 continuous through the seal with 200mm extension on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|---------|---|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10mm ≤ Ø ≤ 22mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 32mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 32mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX for full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm insulated with Butyl Based Elastomeric Foam Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm insulated with Butyl Based Elastomeric Foam Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 35mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | "Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 35mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 32mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|---------|---|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10mm ≤ Ø ≤ 22mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 32mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX for full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|--|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm insulated with Butyl Based Elastomeric Foam Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm insulated with Butyl Based Elastomeric Foam Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 35mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe insulated with Butyl Based Elastomeric Foam Insulation (7.5mm ≤ Ø ≤ 35mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 32mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 32mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|---------|--|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX for full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; ; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 42.4mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (16.5mm ≤ Ø ≤ 40.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.4mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 42.4mm $\leq \varnothing \leq$ 76mm Steel Pipe with Elastomeric Combustible Insulation (16.5mm $\leq \varnothing \leq$ 40.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.4mm $\leq \varnothing \leq$ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm $\leq \varnothing \leq$ 76mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm $\leq \varnothing \leq$ 40.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm $\leq \varnothing \leq$ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm $\leq \varnothing \leq$ 76mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm $\leq \varnothing \leq$ 40.5mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm $\leq \varnothing \leq$ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX for full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm $\leq \varnothing \leq$ 159mm Steel Pipe with Elastomeric Combustible Insulation (40.5mm $\leq \varnothing \leq$ 45mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.8mm $\leq \varnothing \leq$ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm $\leq \varnothing \leq$ 159mm Steel Pipe with Elastomeric Combustible Insulation (40.5mm $\leq \varnothing \leq$ 45mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.8mm $\leq \varnothing \leq$ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm $\leq \varnothing \leq$ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm $\leq \varnothing \leq$ 39mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm $\leq \varnothing \leq$ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 39mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 33.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 33.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|---------|--|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX for full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Elastomeric Combustible Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 42.4mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (16.5mm ≤ Ø ≤ 40.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 42.4mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (16.5mm ≤ Ø ≤ 40.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 40.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|--|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10.2mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 40.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX for full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (40.5mm ≤ Ø ≤ 45mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (40.5mm ≤ Ø ≤ 45mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 39mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 39mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 35mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 35mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 33.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 33.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (8mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| Ø 159mm Steel Pipe with Elastomeric Combustible Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Ø 159mm Steel Pipe with Elastomeric Combustible Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 159mm ≤ Ø ≤ 813mm Steel Pipe with Elastomeric Combustible Insulation (16.5mm ≤ Ø ≤ 40.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 500mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 159mm ≤ Ø ≤ 813mm Steel Pipe with Elastomeric Combustible Insulation (16.5mm ≤ Ø ≤ 40.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 500mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 35mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 35mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 36.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 36.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 36.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 36.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 39mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Elastomeric Combustible Insulation (7.5mm ≤ Ø ≤ 39mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 40.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 40.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|---|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 40.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 40.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 108mm Steel Pipe with Elastomeric Combustible Insulation (14mm ≤ Ø ≤ 42.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 108mm Steel Pipe with Elastomeric Combustible Insulation (14mm ≤ Ø ≤ 42.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 114.3mm Steel Pipe with Elastomeric Combustible Insulation (15.5mm ≤ Ø ≤ 42.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 114.3mm Steel Pipe with Elastomeric Combustible Insulation (15.5mm ≤ Ø ≤ 42.5mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|--|-------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 45mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Acrylic Sealant CFS-S ACR + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 45mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 159mm ≤ Ø ≤ 323.9mm Steel Pipe with Elastomeric Combustible Insulation (9mm ≤ Ø ≤ 25mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Acrylic Sealant CFS-S ACR + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 500mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Full Depth Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (9.5mm ≤ Ø ≤ 45mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (9.5mm ≤ Ø ≤ 45mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (9.5mm ≤ Ø ≤ 45mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Elastomeric Combustible Insulation (9.5mm ≤ Ø ≤ 45mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plasetr Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal 0mm to 15mm: Hilti Firestop Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal 15mm to 50mm: Hilti Firestop Foam CFS-F FX for full depth of wall Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal 0mm to 15mm: Hilti Firestop Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|---------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 42.4mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.4mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 42.4mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.4mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10.2mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (L1) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 22mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: Annular gap seal: 0mm to 15mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|---------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 18mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 22mm ≤ Ø ≤ 42mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm | RIR EWFA 30726700 |
| 42.4mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.4mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 42.4mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.4mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional proection length: 250mm (LI) local interrupted Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10.2mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: 19mm Armaflex AF elastomeric material for thermal insulation | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 19mm Additional protection length: 250mm (LI) local interrupted Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Beading of 2 x 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Min. additional protection width: 50mm Min. final penetration seal thickness: 150mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 10mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional protection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional protection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| Ø 159mm Steel Pipe with Elastomeric Combustible Insulation (14.5mm ≤ Ø ≤ 36.5mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 4mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Ø 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 4mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 159mm ≤ Ø ≤ 813mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional protection length: 500mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 159mm ≤ Ø ≤ 813mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 200mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional protection length: 500mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 450mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10mm ≤ Ø ≤ 35mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|--|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 35mm ≤ Ø ≤ 42mm Copper Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 60mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal 15mm to 50mm: Hilti Firestop Foam CFS-F FX for full depth of floor Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 60mm ≤ Ø ≤ 76mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 108mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 108mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/90/90 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 114.3mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 10.2mm ≤ Ø ≤ 114.3mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/120/120 | Pipe wall thickness: 1mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|--|----------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 76mm ≤ Ø ≤ 323.9mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 323.9mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| Ø 323.9mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 500mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| Ø 323.9mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 1.8mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 500mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 | -/60/60 | "Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX | -/60/60 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|---------------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Firestop Acrylic Sealant CFS-S ACR / CP606 + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 0mm to 15mm Hilti Sealant Depth: Thickness of wall lining Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| 76mm ≤ Ø ≤ 159mm Steel Pipe with Mineral Wool Insulation (Ø 40mm) | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Bandage CFS-B + Hilti Firestop Foam CFS-F FX + Additional Protection: Mineral Wool / Rockwool Klimarock | -/120/120 | Pipe wall thickness: 2mm ≤ Ø ≤ 14.2mm Additional protection thickness: 40mm Additional proection length: 250mm (LI) local interrupted Additional protection density: 40kg/m ³ Annular gap seal: 15mm to 50mm Hilti Firestop Foam CFS-F FX installed to full depth of wall, additional aperture lining may be required Pipe support distance: 330mm (See Report Ref. for full installation details) | RIR EWFA 30726700 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 1 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 1: Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/60/60 | Min. aperture diameter: Ø26mm Max. aperture diameter: Ø36mm Min. seal depth: 25mm Min. gap between edge of penetration and outside collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 1 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard both sides of wall | -/60/60 | Min. aperture diameter: Ø26mm Max. aperture diameter: Ø36mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 1 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 1: Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/60/60 | Min. aperture diameter: Ø30mm Max. aperture diameter: Ø40mm Min. seal depth: 25mm Min. gap between edge of penetration and outside collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 1 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard both sides of wall" | -/60/60 | Min. aperture diameter: Ø30mm Max. aperture diameter: Ø40mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 1 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 1: Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides" | -/60/60 | Min. aperture diameter: Ø35mm Max. aperture diameter: Ø45mm Min. seal depth: 25mm Min. gap between edge of penetration and outside collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|---|------------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 1 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard both sides of wall" | -/60/60 | Min. aperture diameter: Ø35mm Max. aperture diameter: Ø45mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm/16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides | -/120/120 | Min. aperture diameter: Ø26mm Max. aperture diameter: Ø36mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm/16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backfilling material: Mineral wool (Tightly compressed) | -/120/120 | Min. aperture diameter: Ø36mm Max. aperture diameter: Ø150mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm/16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides | -/120/120 | Min. aperture diameter: Ø30mm Max. aperture diameter: Ø40mm Min. seal depth: 25mm | EWFA RIR 33136700.4 |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm/16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backfilling material: Mineral wool (Tightly compressed) | -/120/120 | Min. aperture diameter: Ø40mm Max. aperture diameter: Ø150mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm/16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides | -/120/120 | Min. aperture diameter: Ø35mm Max. aperture diameter: Ø45mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm/16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backfilling material: Mineral wool (Tightly compressed) | -/120/120 | Min. aperture diameter: Ø45mm Max. aperture diameter: Ø150mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 1: Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides + Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Min. aperture diameter: Ø26mm Max. aperture diameter: Ø36mm Min. seal depth: 25mm Min. gap between edge of penetration and outside collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + 2 x Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Min. aperture diameter: Ø26mm Max. aperture diameter: Ø36mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|------------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 1: Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides + Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Min. aperture diameter: Ø30mm Max. aperture diameter: Ø40mm Min. seal depth: 25mm Min. gap between edge of penetration and outside collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + 2 x Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Min. aperture diameter: Ø30mm Max. aperture diameter: Ø40mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional Protection 1: Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides + Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Min. aperture diameter: Ø35mm Max. aperture diameter: Ø45mm Min. seal depth: 25mm Min. gap between edge of penetration and outside collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + 2 x Additional Protection 2: 1 layer of 13mm or 16mm Fire Rated Plasterboard | -/120/120 | Min. aperture diameter: Ø35mm Max. aperture diameter: Ø45mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides | -/120/120 | Min. aperture diameter: Ø26mm Max. aperture diameter: Ø36mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø16mm x 1.2-2.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backfilling material: Mineral wool (Tightly compressed) | -/120/120 | Min. aperture diameter: Ø36mm Max. aperture diameter: Ø150mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides | -/120/120 | Min. aperture diameter: Ø30mm Max. aperture diameter: Ø40mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø20mm x 2.3-3.4mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backfilling material: Mineral wool (Tightly compressed) | -/120/120 | Min. aperture diameter: Ø40mm Max. aperture diameter: Ø150mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides | -/120/120 | Min. aperture diameter: Ø35mm Max. aperture diameter: Ø45mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|------------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø25mm x 2.8-3.9mm PE-X Pipe | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backfilling material: Mineral wool (Tightly compressed) | -/120/120 | Min. aperture diameter: Ø45mm Max. aperture diameter: Ø150mm Min. seal depth: 25mm (See Report Ref. for full installation details) | EWFA RIR 33136700.4 |
| Ø43 uPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/90 | Collar Size: 50/1.5" Pipe Wall Thickness: 2mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø56 uPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 63/2" Pipe Wall Thickness: 2.2mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø69 uPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/90 | Collar Size: 75/2.5" Pipe Wall Thickness: 2.7mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø85 uPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/90 | Collar Size: 90/3" Pipe Wall Thickness: 2.9mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø110 uPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 3.2mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø160 uPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 160/6" Pipe Wall Thickness: 4.5mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details)" | EWFA RIR 27006-03 |
| Ø40 PPR Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 6mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|-------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø50 PPR Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 6.9mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø65 PPR Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/90 | Collar Size: 75/2.5" Pipe Wall Thickness: 8.6mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø80 PPR Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/90 | Collar Size: 90/3" Pipe Wall Thickness: 10.3mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø100 PPR Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 12.3mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø110 PPR Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 15mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø125 PPR Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 125/5" Pipe Wall Thickness: 19mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø40 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 5mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø50 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 4.6mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø65 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/90 | Collar Size: 75/2.5" Pipe Wall Thickness: 5.8mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|-------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø80 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/90 | Collar Size: 90/3" Pipe Wall Thickness: 6.8mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø100 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 8.2mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø110 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 12mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø125 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 125/5" Pipe Wall Thickness: 13mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø200 PE-100 (HDPE) Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/60 | Collar Size: 200/8" Pipe Wall Thickness: 20mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø50 Raupiano Plus Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 1.8mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø75 Raupiano Plus Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 75/2.5" Pipe Wall Thickness: 1.9mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø90 Raupiano Plus Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 90/3" Pipe Wall Thickness: 2.2mm Depth of annular gap seal: full depth of wall lining | EWFA RIR 27006-03 |
| Ø110 Raupiano Plus Pipe | Wall | Plaster Board Wall; lined with min. 2 x 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 2.7mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|---|-------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø43 uPVC Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/240/240 | Collar Size: 50/1.5" Pipe Wall Thickness: 2mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø56 uPVC Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/240/240 | Collar Size: 63/2" Pipe Wall Thickness: 2.2mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø69 uPVC Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/240/240 | Collar Size: 75/2.5" Pipe Wall Thickness: 2.7mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø85 uPVC Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/240/240 | Collar Size: 90/3" Pipe Wall Thickness: 2.9mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø110 uPVC Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/240/240 | Collar Size: 110/4" Pipe Wall Thickness: 3.2mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø160 uPVC Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | "Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606" | -/240/240 | Collar Size: 160/6" Pipe Wall Thickness: 4.5mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø40 PPR Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/180/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 6mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø50 PPR Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 6.9mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|---|-------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø65 PPR Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 75/2.5" Pipe Wall Thickness: 8.6mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø80 PPR Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 90/3" Pipe Wall Thickness: 10.3mm Depth of annular gap seal: full depth of concrete slab | EWFA RIR 27006-03 |
| Ø100 PPR Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 12.3mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø110 PPR Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 15mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø125 PPR Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/240/120 | Collar Size: 125/5" Pipe Wall Thickness: 19mm Depth of annular gap seal: full depth of concrete slab (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø40 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/180/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 5mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø50 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/90/90 | Collar Size: 50/1.5" Pipe Wall Thickness: 4.6mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø65 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/90/90 | Collar Size: 75/2.5" Pipe Wall Thickness: 5.8mm Depth of annular gap seal: full depth of concrete slab (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø80 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/90/90 | Collar Size: 90/3" Pipe Wall Thickness: 6.8mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|---|-------------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø100 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/90/90 | Collar Size: 110/4" Pipe Wall Thickness: 8.2mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø110 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/90/90 | Collar Size: 110/4" Pipe Wall Thickness: 12mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø125 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/60/60 | Collar Size: 125/5" Pipe Wall Thickness: 13mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø200 PE-100 (HDPE) Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/30/30 | Collar Size: 200/8" Pipe Wall Thickness: 20mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø50 Raupiano Plus Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 1.8mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø75 Raupiano Plus Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 75/2.5" Pipe Wall Thickness: 1.9mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø90 Raupiano Plus Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 90/3" Pipe Wall Thickness: 2.2mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø110 Raupiano Plus Pipe | Floor | Concrete Floor (Min. Floor Thickness 120mm) | Hilti Firestop Collar CFS-C P fixed to one side of the floor + Annular Gap Seal: Mortar or Hilti Firestop Acrylic Selant CFS-S ACR / CP606 | -/120/120 | Collar Size: 110/4" Pipe Wall Thickness: 2.7mm Mortar Depth: Full depth of floor Sealant Depth: 20mm on underside of floor + PEF backing rod (See Report Ref. for full installation details) | EWFA RIR 27006-03 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|------------------------------------|-------------|--|--|-----------|---|-------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| Ø26.7mm CPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x min. 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 1.9 - 2.1mm Armaflex AF Insulation Thickness: 9mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø33.4mm CPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x min. 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 50/1.5" Pipe Wall Thickness: 2.4 - 2.6mm Armaflex AF Insulation Thickness: 9mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø42.2mm CPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x min. 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 63/2" Pipe Wall Thickness: 3.1 - 3.3mm Armaflex AF Insulation Thickness: 9mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |
| Ø48.3mm CPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x min. 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 75/2.5" Pipe Wall Thickness: 3.5 - 3.8mm Armaflex AF Insulation Thickness: 9mm Depth of annular gap seal: full depth of wall lining | EWFA RIR 27006-03 |
| Ø60.3mm CPVC Pipe | Wall | Plaster Board Wall; lined with min. 2 x min. 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti Firestop Collar CFS-C P fixed to each side of wall + Hilti Firestop Acrylic Selant CFS-S ACR / CP606 in annular gap each side of wall | -/120/120 | Collar Size: 75/2.5" Pipe Wall Thickness: 4.4 - 4.7mm Armaflex AF Insulation Thickness: 13mm Depth of annular gap seal: full depth of wall lining (See Report Ref. for full installation details) | EWFA RIR 27006-03 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|--|--------------------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| All sheathed cable types <20mm OD, bundles of cables up to 100% full | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard on each side of stud | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/60 | Opening / Core Hole Size: 63 -76mm Annular Seal Depth min. 20mm Each cable not exceeding 20mm diameter (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types <20mm OD, bundles of cables up to 100% full | Wall | Plaster Board Wall;with min. 2 x 13mm / 16mm Fire Rated Plasterboard on each side of stud | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/60 | Opening / Core Hole Size: 113 -122mm Annular Seal Depth min. 20mm Each cable not exceeding 20mm diameter (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types <2mm in diameter (not bundles) | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size: 63 -76mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types, bundles up to 36 mm diameter | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size: 63 -76mm Annular Seal Depth min. 20mm Each cable not exceeding 21 mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types up to 21 mm diameter (not bundles) | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size: 113 -122mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types up to 50 mm diameter (not bundles) | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/90 | Opening / Core Hole Size:113 -122mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types up to 80 mm diameter (not bundles) | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/60 | Opening / Core Hole Size:113 -122mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types, bundles up to 86 mm diameter | Wall | Rigid Wall; Concrete / Masonry Wall (Min. Thickness 100mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size:113 -122mm Annular Seal Depth min. 20mm Each cable not exceeding 21 mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types up to 21mm diameter (not bundles) | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size:63 -76mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|--------------------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| All sheathed cable types, bundles up to 36 mm diameter | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL S Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size: 63 -76mm Annular Seal Depth min. 20mm Each cable not exceeding 21 mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types up to 50 mm diameter (not bundles) | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size: 113 -122mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types up to 80 mm diameter (not bundles) | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/60 | Opening / Core Hole Size:113 -122mm Annular Seal Depth min. 20mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| All sheathed cable types, bundles up to 86 mm diameter | Floor | Rigid Floor; Concrete Floor (Min. Floor Thickness 150mm) | Hilti CFS-SL M Speed Sleeve + Hilti CFS-S ACR sealant around sleeve on each side of wall | -/120/120 | Opening / Core Hole Size:113 -122mm Annular Seal Depth min. 20mm Each cable not exceeding 21 mm Max. wall thickness: 200mm (See Report Ref. for full installation details) | Branz Appraisal No. 813 (2013) |
| Single cable up to 16mm OD | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backlifting material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single cable up to 16mm OD | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backlifting material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Cables bundles up to a bundle size of 20mm | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backlifting material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Cables bundles up to a bundle size of 20mm | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backlifting material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Power Cables with Cable Tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backlifting material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/60 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|---|------------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| PVC Insulated Power Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/60 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Power Cables with Cable Tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Two layers of 10mm wide Hilti Firestop Bandage CFS-P BA each side + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Power Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Two layers of 10mm wide Hilti Firestop Bandage CFS-P BA each side + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/60 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/60 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Two layers of 10mm wide Hilti Firestop Bandage CFS-P BA each side + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Two layers of 10mm wide Hilti Firestop Bandage CFS-P BA each side + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits and tubes up to 16mm with or without cables or optic fibre cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits and tubes up to 16mm with or without cables or optic fibre cables | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|------------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| Single PVC conduits with diameter $16\text{mm} \leq \varnothing \leq 32\text{mm}$, wall thickness 1-3mm with or without cables or optic fibre cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits with diameter $16\text{mm} \leq \varnothing \leq 32\text{mm}$, wall thickness 1-3mm with or without cables or optic fibre cables | Wall | Plaster Board Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 50mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Wall | Plaster Board Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant in front of wall on both sides Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 25mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant in front of wall on both sides Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 25mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Small cable up to 16mm and for bundles up to a bundle size of 20mm | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Power Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant in front of wall on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 100mm,) | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 50mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|------------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| PVC Insulated Power Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant in front of wall on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 100mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 100mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant in front of wall on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 100mm,) | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 50mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant in front of wall on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 100mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 100mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits and tubes up to 16mm with or without cables or optic fibre cables | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits with diameter $16\text{mm} \leq \varnothing \leq 32\text{mm}$, wall thickness 1-3mm with or without cables or optic fibre cables | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 100mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Wall | Rigid Wall; Concrete / Solid or Hollow Masonry (Min. Wall Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| 150mm x 150mm Square Blank Opening, no services | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 95mm,) | -/120/120 | Blank opening: max. 150mm x 150mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Small cable up to 16mm and for bundles up to a bundle size of 20mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside Backliffing material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Power Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 95mm,) | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 30mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|------------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| PVC Insulated Power Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 95mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 130mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 95mm,) | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 30mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 95mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 130mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits and tubes up to 16mm with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside Backliffing material optional | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 30mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits and tubes up to 16mm with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 80mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside Backliffing material optional | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 30mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside Backliffing material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 80mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits with diameter 16mm ≤ Ø ≤ 32mm, wall thickness 1-3mm with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant on both sides + Backliffing material: Mineral wool (Tightly compressed, Min. Thickness 95mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 80mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|---|------------------------|
| INSULATED COMBUSTIBLE PIPES | | | | | | |
| Small cable up to 16mm and for bundles up to a bundle size of 20mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside Backlifting material optional | -/120/120 | Blank opening: max. 40mm x 40mm or circular opening of equivalent size Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Power Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Backlifting material: Mineral wool (Tightly compressed, Min. Thickness 125mm,) | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Power Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside + Backlifting material: Mineral wool (Tightly compressed, Min. Thickness 125mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 100mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Backlifting material: Mineral wool (Tightly compressed, Min. Thickness 125mm,) | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details)" | EWFA RIR 27912900.3 |
| PVC Insulated Communication Cables with Cable Tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside + Backlifting material: Mineral wool (Tightly compressed, Min. Thickness 125mm,) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 100mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits and tubes up to 16mm with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside Backlifting material optional | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single PVC conduits and tubes up to 16mm with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside Backlifting material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 50mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside Backlifting material optional | -/120/90 | Min. depth of seal: 25mm Annular seal width: 10mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Steel conduits and tubes up to 16mm and min. 1.5mm wall thickness with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on topside + Additional sealant on topside Backlifting material optional | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 50mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|--|------------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Single PVC conduits with diameter 16mm ≤ Ø ≤ 32mm, wall thickness 1-3mm with or without cables or optic fibre cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Additional sealant on both sides + Backfilling material: Mineral wool (Tightly compressed, Min. Thickness 125mm.) | -/120/120 | Min. depth of seal: 25mm Annular seal width: 10mm Additional sealant min. thickness: 10mm Additional sealant min. length: 50mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø16mm x 1.75mm PVC conduit with optic fibre cables or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø16mm x 1.75mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/60 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø16mm x 1.75mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 128mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø20mm x 1.95mm PVC conduit with optic fibre cables or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 128mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø20mm x 1.95mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/60 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø20mm x 1.95mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 128mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Ø25mm x 1.95mm PVC conduit with optic fibre cables or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø25mm x 1.95mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/60 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø25mm x 1.95mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 128mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø32mm x 2.25mm PVC conduit with optic fibre cables or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø32mm x 2.25mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/60 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø32mm x 2.25mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 128mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø40mm x 2.55mm PVC conduit with optic fibre cables or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Ø40mm x 2.55mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/60 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm | EWFA RIR 27912900.3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Ø40mm x 2.55mm PVC conduit with optic fibre cables or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Solid or Hollow Masonry (Min. Wall Thickness 128mm) | Hilti Firestop Intumescent Sealant CP 611A on both sides + Hilti Firestop Collar CP 644/ CSF-C P-50/1.5 on both sides | -/120/120 | Hole diameter up to 50mm Thickness of penetration seal: 23mm Min. annular gap between conduit and collar edge: 5mm (See Report Ref. for full installation details) | EWFA RIR 27912900.3 |
| Single Cables 4mm ≤ Ø ≤ 25mm | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Min. sealant depth: full depth of wall Aperture diameter: 6mm ≤ Ø ≤ 40mm, refer to RIR for more details (See Report Ref. for full installation details) | EWFA RIR 32796900 |
| Single Cables 4mm ≤ Ø ≤ 25mm | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm) | Hilti Firestop Intumescent Sealant CP 611A + Additional Protection: Hilti Firestop Intumescent Sealant CP 611A | -/90/90 | Min. sealant depth: 25mm Aperture diameter: 6mm ≤ Ø ≤ 40mm, refer to RIR for more details Min. depth of additional protection: 50mm (See Report Ref. for full installation details) | EWFA RIR 32796900 |
| Single Cables 4mm ≤ Ø ≤ 25mm | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Speedwall Panel / Solid or Hollow Masonry (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A + Additional Protection: Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. sealant depth: 25mm Aperture diameter: 6mm ≤ Ø ≤ 40mm, refer to RIR for more details Min. depth of additional protection: 50mm (See Report Ref. for full installation details) | EWFA RIR 32796900 |
| Single Cables 4mm ≤ Ø ≤ 25mm | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Intumescent Sealant CP 611A + Additional Protection: Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. sealant depth: 25mm Aperture diameter: 6mm ≤ Ø ≤ 40mm, refer to RIR for more details Min. depth of additional protection: 50mm (See Report Ref. for full installation details) | EWFA RIR 32796900 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/60 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/60 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Single Plastic Conduit up to 16mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/90 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/90 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of Steel Conduits and Tubes up to 16mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|---|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundle Plastic Conduits up to 32mm filled with cables, optic fibres or empty. | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Max. diameter of conduit: 100mm Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/60 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/60 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Single Plastic Conduit up to 16mm filled with cables, optic fibres or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/60 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA top side only | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/60 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA top side only | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of Steel Conduits and Tubes up to 16mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Single Plastic Conduit up to 16mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 150mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/90 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/90 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA each side | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|---|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Up to 60% full of Steel Conduits and Tubes up to 16mm filled with cables, optic fibres or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Bundle Plastic Conduits up to 32mm filled with cables, optic fibres or empty. | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Speedpanel Panel / Solid or Hollow Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Max. diameter of conduit: 100mm Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/90 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Power Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA top side only | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/90 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of PVC insulated Communication Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth + Hilti Firestop Putty Bandage CFS-P BA top side only | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Up to 60% full of Steel Conduits and Tubes up to 16mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm Max. 60% of seal area to be penetrated (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| Bundle Plastic Conduits up to 32mm filled with cables, optic fibres or empty. | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Flexible Firestop Foam CFS-F FX for full seal depth | -/120/120 | Max. diameter of conduit: 100mm Min. seal thickness: 200mm Max. opening area: 0.16m ² or max. diameter ≤ 400mm (See Report Ref. for full installation details) | EWFA RIR 37571100.1 |
| PVC Insulated Power Cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m ³ (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Power Cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A + Hilti Firestop Putty Bandage CFS-P BA | -/120/120 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m ³ (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m ³ (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A + Hilti Firestop Putty Bandage CFS-P BA | -/120/120 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m ³ (See Report Ref. for full installation details) | EWFA RIR 27937400 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|----------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Single Plastic Conduit up to 40mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Conduits up to 20mm filled with cables, optic fibres or empty. | Wall | Plaster Board Wall; lined with min. 2 x 13mm / 16mm Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity insulation: mineral wool Min. mineral wool thickness: 50mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Power Cables | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Power Cables | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A + Hilti Firestop Putty Bandage CFS-P BA | -/120/120 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Communication Cables | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Communication Cables | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A + Hilti Firestop Putty Bandage CFS-P BA | -/120/120 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Single Plastic Conduit up to 40mm filled with cables, optic fibres or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|----------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Conduits up to 20mm filled with cables, optic fibres or empty. | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 75mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Min. seal thickness: 150mm Opening size: $52\text{mm} \leq \varnothing \leq 202\text{mm}$ Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 150mm Opening size: $52\text{mm} \leq \varnothing \leq 202\text{mm}$ Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 150mm Opening size: $52\text{mm} \leq \varnothing \leq 202\text{mm}$ Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Steel Conduits and Tubes up to 16mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 150mm Opening size: $52\text{mm} \leq \varnothing \leq 202\text{mm}$ Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Non-Standard PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A + Hilti Firestop Putty Bandage CFS-P BA | -/120/120 | Cables up to $\varnothing 48\text{mm}$ may be bundled up to 90mm in diameter Min. seal thickness: 150mm Opening size: $52\text{mm} \leq \varnothing \leq 202\text{mm}$ Max. 60% of seal area can be penetrated (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Non-Standard PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A + Hilti Firestop Putty Bandage CFS-P BA | -/120/120 | Cables up to $\varnothing 48\text{mm}$ may be bundled up to 90mm in diameter Min. seal thickness: 150mm Opening size: $52\text{mm} \leq \varnothing \leq 202\text{mm}$ Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| Single Plastic Conduit up to 40mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 150mm Opening size: $52\text{mm} \leq \varnothing \leq 202\text{mm}$ Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|--|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Conduits up to 20mm filled with cables, optic fibres or empty. | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Plug CFS-PL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Min. seal thickness: 150mm Opening size: 52mm ≤ Ø ≤ 202mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 27937400 |
| PVC Insulated Power Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) OR Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Power Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) OR Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Communication Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) OR Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Communication Cables with or without cable tray | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) OR Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Single Plastic Conduit up to 40mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) OR Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details)" | EWFA RIR 28870-00 |
| Conduits up to 20mm filled with cables, optic fibres or empty. | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) OR Aperture lined with Fire Rated Plasterboard each side of stud as required. (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Cellflex: 27.8mm ≤ Ø ≤ 59.9mm | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) OR Aperture lined with Fire Rated Plasterboard each side of stud as required. (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Heliflex: 28mm ≤ Ø ≤ 59.9mm | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) OR Aperture lined with Fire Rated Plasterboard each side of stud as required. (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Radiaflex: 28.5mm ≤ Ø ≤ 48.2mm | Wall | Plaster Board Wall; lined with min. 2 x 12.5mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) OR Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Power Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required. (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Power Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Communication Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Communication Cables with or without cable tray | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Steel Conduits and Tubes up to 16mm filled with cables, optic fibres or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Single Plastic Conduit up to 40mm filled with cables, optic fibres or empty | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Conduits up to 20mm filled with cables, optic fibres or empty. | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Cellflex: 27.8mm $\leq \varnothing \leq$ 59.9mm | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Helifex: 28mm $\leq \varnothing \leq$ 59.9mm | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Radiaflex: 28.5mm $\leq \varnothing \leq$ 48.2mm | Wall | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 200mm Max. opening size: 1000mm x 1000mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm Aperture lined with Fire Rated Plasterboard each side of stud as required (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Power Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Power Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on top side | -/120/120 | Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| PVC Insulated Communication Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|--|-----------|--|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Communication Cables with or without cable tray | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A + 1 layer of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on top side | -/120/120 | Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Steel Conduits and Tubes up to 16mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Single Plastic Conduit up to 40mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Conduits up to 20mm filled with cables, optic fibres or empty. | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Cellflex: 27.8mm $\leq \varnothing \leq 59.9$ mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Heliflex: 28mm $\leq \varnothing \leq 59.9$ mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |
| Coaxial cable RFS Radiaflex: 28.5mm $\leq \varnothing \leq 48.2$ mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Block CFS-BL + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 100mm Max. opening size: 1000mm x 1000mm Min. seal thickness: 200mm Max. 60% of seal area can be penetrated Min. depth of CP 611A sealant: 20mm (See Report Ref. for full installation details) | EWFA RIR 28870-00 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|----------|--|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Power Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m ³) (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Communication Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Communication Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of Plastic Conduits up to 16mm without cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Max. bundle diameter: 80mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundle of Plastic Conduits up to 16mm filled with cables or optic fibres | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 80mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Radiaflex: 28.5mm ≤ Ø ≤ 48.2mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) | EWFA RIR 38022100 |
| Coaxial cable RFS Cellflex: 27.8mm ≤ Ø ≤ 59.9mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Heliflex: 28mm ≤ Ø ≤ 59.9mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Blank Opening, no services | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC | -/120/120 | Min. seal thickness: 200mm Max. blank opening size: 108mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|----------|--|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Power Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | ~/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | ~/120/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | ~/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details)" | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | ~/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | ~/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Communication Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | ~/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundle of PVC Insulated Communication Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of Plastic Conduits up to 16mm without cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Max. bundle diameter: 80mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of Plastic Conduits up to 16mm filled with cables or optic fibres | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Max. bundle diameter: 80mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Radiaflex: $28.5\text{mm} \leq \text{Ø} \leq 48.2\text{mm}$ | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/120 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Cellflex: $27.8\text{mm} \leq \text{Ø} \leq 59.9\text{mm}$ | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Coaxial cable RFS Helifex: 28mm ≤ Ø ≤ 59.9mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/120/90 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Blank Opening, no services | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC | -/60/60 | Min. seal thickness: 200mm Max. blank opening size: 108mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|---------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/60/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Communication Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Communication Cables up to Ø50mm | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/60/60 | Max. bundle diameter: 90mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundle of Plastic Conduits up to 16mm filled with cables, optic fibres, or empty | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Max. bundle diameter: 80mm Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Radiaflex: $28.5\text{mm} \leq \text{Ø} \leq 48.2\text{mm}$ | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Cellflex: $27.8\text{mm} \leq \text{Ø} \leq 59.9\text{mm}$ | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Heliflex: $28\text{mm} \leq \text{Ø} \leq 59.9\text{mm}$ | Wall | Plaster Board Wall: lined with min. 2 x 13mm / 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti Firestop Cable Collar CFS-CC + Hilti Firestop Intumescent Sealant CP 611A | -/60/60 | Min. seal thickness: 200mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side For timber stud wall: Wall cavity filled with Mineral Wool (Min. thickness 50mm, Density 100kg/m3) (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/90 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/90 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details)" | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundle of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | ~/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | ~/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of Plastic Conduits up to 16mm filled with cables, optic fibres, or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | ~/120/120 | Max. bundle diameter: 80mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Radiaflex: $28.5\text{mm} \leq \text{Ø} \leq 48.2\text{mm}$ | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | ~/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Cellflex: $27.8\text{mm} \leq \text{Ø} \leq 59.9\text{mm}$ | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | ~/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Heliflex: $28\text{mm} \leq \text{Ø} \leq 59.9\text{mm}$ | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | ~/120/90 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/60 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/60 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details)" | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundles of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Power or Communication Cables up to Ø21mm, phased out in a perpendicular manner though cable collar along topside of floor | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Power or Communication Cables up to Ø21mm, phased out in a perpendicular manner though cable collar along topside of floor | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on each side + Hilti Firestop Intumescent Sealant CP 611A on each side + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/90 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/90 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/90 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Single Plastic Conduit up to 32mm filled with cables, optic fibres or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of Plastic Conduits up to 16mm filled with cables, optic fibres, or empty | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/120 | Max. bundle diameter: 80mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Radiaflex: $28.5\text{mm} \leq \varnothing \leq 48.2\text{mm}$ | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Cellflex: $27.8\text{mm} \leq \varnothing \leq 59.9\text{mm}$ | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Coaxial cable RFS Heliflex: $28\text{mm} \leq \varnothing \leq 59.9\text{mm}$ | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 120mm (+ Aperture Beading)) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/90 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/60 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Power Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|---|-------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/60 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| PVC Insulated Communication Cables | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Power Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundles of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/60 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Communication Cables up to Ø50mm | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Max. bundle diameter: 90mm Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|--|---|---|-----------|---|---------------------|
| ELECTRICAL SERVICE PENETRATIONS | | | | | | |
| Bundle of PVC Insulated Power or Communication Cables up to Ø21mm, phased out in a perpendicular manner through cable collar along topside of floor | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Bundle of PVC Insulated Power or Communication Cables up to Ø21mm, phased out in a perpendicular manner through cable collar along topside of floor | Floor | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti Firestop Cable Collar CFS-CC on underside only + Hilti Firestop Intumescent Sealant CP 611A on underside only + 2 layers of 100mm wide Hilti Firestop Putty Bandage CFS-P BA on each side | -/120/120 | Min. seal thickness: 250mm Max. opening size: 108mm Max. 60% of seal area can be penetrated Min. depth of intumescent sealant: 20mm Aperture beading: min. 1x 13mm or 16mm Fire Grade Plasterboard each side (See Report Ref. for full installation details) | EWFA RIR 38022100 |
| Control Joints and Gap Seals in Plaster Board | Horizontal Deflection Head or Top-of-wall, Fire Rated Plasterboard to Concrete | Plaster Board Wall; lined with min. 1 x 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti CP 606 Acrylic Fire Rated Sealant | -/60/60 | Max. joint width: 20mm Min. depth of sealant: depth of wall lining (13mm) (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Horizontal Deflection Head or Top-of-wall, Fire Rated Plasterboard to Concrete | Plaster Board Wall; lined with min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 96mm) | Hilti CP 606 Acrylic Fire Rated Sealant | -/90/90 | Max. joint width: 20mm Min. depth of sealant: depth of wall lining (16mm) (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Horizontal Deflection Head | Plaster Board Wall; lined with min. 2 x min. 13mm /16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 20mm Backfilling material: PE rod or Mineral wool (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Horizontal Deflection Head | Plaster Board Wall; lined with min. 2 x min. 13mm /16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: depth of wall linings (26mm or 32mm) Min. mineral wool density: 100kg/m ³ (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|---|---|---|-----------|---|------------------------|
| CONSTRUCTION JOINTS | | | | | | |
| Control Joints and Gap Seals in Plaster Board | Horizontal Wall, Fire Rated Plasterboard to Floor | Plaster Board Wall; lined with min. 2 x min. 13mm /16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool" | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Horizontal Wall, Fire Rated Plasterboard to Floor | Plaster Board Wall; lined with min. 2 x min. 13mm /16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: depth of wall linings (26mm or 32mm) Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Horizontal Deflection Head | Plaster Board Wall; lined with min. 2x min. 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant | -/180/180 | Max. joint width: 27mm Min. depth of sealant: 32mm (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Vertical Wall to Wall and Control Joints | Plaster Board Wall; lined with min. 1 x min. 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Mineral wool | -/60/60 | Max. joint width: 30mm Min. depth of sealant: depth of wall lining (13mm) Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Vertical Wall to Wall and Control Joints | Plaster Board Wall; lined with min. 1 x 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 96mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Mineral wool | -/90/90 | Max. joint width: 30mm Min. depth of sealant: depth of wall lining (16mm) Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Vertical Wall to Wall and Control Joints | Plaster Board Wall; lined with min. 2 x min. 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Control Joints and Gap Seals in Plaster Board | Vertical Wall to Wall and Control Joints | Plaster Board Wall; lined with min. 2 x min. 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 40mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Deflection Head | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Deflection Head | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 40mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Wall to Ceiling | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|--|--|--|-----------|---|---------------------|
| CONSTRUCTION JOINTS | | | | | | |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Wall to Ceiling | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 40mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Vertical Wall to Wall and Control Joints | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Vertical Wall to Wall and Control Joints | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/120/120 | Max. joint width: 30mm Min. depth of sealant: 40mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Deflection Head | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 230mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/240/240 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Deflection Head | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 230mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/240/180 | Max. joint width: 30mm Min. depth of sealant: 40mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Wall to Ceiling | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 230mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/240/240 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Horizontal Wall to Ceiling | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 230mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/240/180 | Max. joint width: 30mm Min. depth of sealant: 40mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Vertical Wall to Wall and Control Joints | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 230mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/240/240 | Max. joint width: 30mm Min. depth of sealant: 20mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Walls | Vertical Wall to Wall and Control Joints | Rigid Wall; Solid Concrete / Aerated Concrete / Masonry (Min. Wall Thickness 230mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE rod or Mineral wool | -/240/180 | Max. joint width: 30mm Min. depth of sealant: 40mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Gap Seals between Walls and Floors with Metal Decks | Horizontal Fire Rated Plasterboard Wall Parallel with deck profile or Fire Rated Plasterboard Wall Across the deck profile | Plaster Board Wall; lined with min. 1 x min. 13mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 90mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: Mineral wool | -/60/60 | Max. joint width: 65mm Min. depth of sealant: 5mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|---|---|--|-----------|--|------------------------|
| CONSTRUCTION JOINTS | | | | | | |
| Gap Seals between Walls and Floors with Metal Decks | Horizontal Fire Rated Plasterboard Wall Parallel with deck profile or Fire Rated Plasterboard Wall Across the deck profile | Plaster Board Wall; lined with min. 1 x min. 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 96mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: Mineral wool ((Min. density 100kg/m3) | -/90/90 | Max. joint width: 65mm Min. depth of sealant: 5mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Gap Seals between Walls and Floors with Metal Decks | Horizontal Fire Rated Plasterboard Wall Parallel with deck profile or Fire Rated Plasterboard Wall Across the deck profile | Plaster Board Wall; lined with min. 2 x min. 13mm or 16mm Fire Rated Plasterboard each side of stud (Min. Wall Thickness 100mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: Mineral wool | -/120/120 | Max. joint width: 65mm Min. depth of sealant: 5mm Min. mineral wool density: 100kg/m3 (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Floors | Floor; Mid Slab Concrete Joint | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: PE Rod | -/240/240 | Max. joint width: 20mm Min. depth of sealant: 10mm (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Floors | Floor; Mid Slab Concrete Joint | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: CF 126 Foam | -/240/180 | Max. joint width: 20mm Min. depth of sealant: 15mm Min. depth of backfilling material: 135mm | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Floors | Floor; Mid Slab Concrete Joint | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: Mineral wool | -/240/180 | Max. joint width: 30mm Min. depth of sealant: 15mm Min. mineral wool density: 100kg/m3 Min. mineral wool depth: 70mm (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |
| Linear Joints and Gap Seals in Rigid Floors | Floor; Mid Slab Concrete Joint | Rigid Floor; Solid Concrete / Aerated Concrete (Min. Floor Thickness 150mm) | Hilti CP 606 Acrylic Fire Rated Sealant + Backfilling material: Mineral wool | -/240/240 | Max. joint width: 15mm Min. depth of sealant: 6mm Min. mineral wool density: 100kg/m3 Min. mineral wool depth: 144mm (See Report Ref. for full installation details) | EWFA RIR 29226700.1 |

iPASSIVE

Manufacturer Code: IP

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The products listed in this register have all been tested to AS1530.4-2005 or Assessed to AS 4072.1-2005 as referenced within the New Zealand Building Code.

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref |
|---------------------|-------------|---|--|-----------|--|--------------|
| BLANK SEALS | | | | | | |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic either side or any position in between with stone wool backing min 35kg/m3 density | -/240/60 | min seal depth 25mm, max seal size 300x300mm, min 48mm backing | FAS180387C.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic either side or any position in between with stone wool backing min 35kg/m3 density | -/240/120 | min seal depth 25mm, max seal size 35x35mm/Ø36mm, min 48mm backing | FAS180387C.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic to both sides with stone wool backing min 35kg/m3 density, min annular 10mm | -/240/240 | min seal depth 15mm, max seal size 300x300mm, min 25mm thick backing | FAS180387C.1 |
| Blank | Wall | Plasterboard from 75mm, single layer 13mm board | iPASSIVE FR Acrylic to both sides with any backing material, min annular 10mm | -/60/60 | min seal depth 12.5mm, max seal size 150x150mm / Ø344mm | FAS180387C.1 |
| Blank | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic to both sides backed with 20mm deep stone wool 35-140kg/m3 | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm | FAS180387C.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep to top side backed with 20mm deep stone wool min 35kg/m3 | -/90/60 | min seal depth 15mm, max seal size 300x300mm | FAS180387C.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep to top side backed with 25mm deep stone wool min 35kg/m3 | -120/120 | min seal depth 25mm, max seal size 300x300mm | FAS180387C.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep to top side backed with 48mm AES mineral fibre | -240/240 | min seal depth 15mm, max seal size 300x300mm | FAS180387C.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep to both sides backed with 25mm deep stone wool min 35kg/m3 | -/240/240 | min seal depth 15mm, max seal size 300x300mm | FAS180387C.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 1200x1200mm | FAS180387A.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 1200 x unlimited width | FAS180387A.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 1200 x unlimited width | FAS180387A.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, protruding, boards separated by min 90mm , perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 600x600mm | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|--------------|
| BLANK SEALS | | | | | | |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, pattress, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 600x600mm, pattress fixed with 100mm steel screws & penny washers / 350mm centres, min 50mm overlap on opening | FAS180387A.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/180 | max seal size 1200 x 600mm | FAS180387A.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/120 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/120 | max seal size 1200 x 600mm | FAS180387A.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/90 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Blank | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/120 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/120 | max seal size 1200 x 2400mm wide | FAS180387D.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/240/240 | max seal size 1200 x 2400mm wide | FAS180387D.1 |
| Blank | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to both sides, 50mm stone wool 150kg /m3 backing | -/240/240 | max seal size 1200 x 2400mm wide | FAS180387D.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/180 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/240/240 | max seal size 1200 x 2400mm | FAS180387D.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 150mm | -/240/180 | max seal size 1200 x 2400mm | FAS180387D.1 |
| Blank | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/120 | max seal size 1200 x 2400mm wide | FAS180387D.1 |
| Blank | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm both sides | -/120/120 | max seal size 15mm | FAS180387E.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm | iPASSIVE FR Putty Cord 15mm to bottom face | -/120/30 | max seal size 15mm | FAS180387E.1 |
| Blank | Floor | Concrete, Aerated concrete, Masonry, from 150mm | iPASSIVE FR Putty Cord 15mm both sides | -/120/120 | max seal size 15mm | FAS180387E.1 |
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Mild/ Stainless Steel Ø4mm / 0.7 - 2 mm wall | Wall | Plasterboard from 75mm, single layer 13mm board | iPASSIVE FR Acrylic 12.5mm deep, to both sides, min annular 10mm | -/60/45 | min seal depth 12.5mm, max seal size 150x150mm / Ø344mm | FAS180387C.1 |
| Mild/ Stainless Steel Ø5 - Ø22mm / 0.7 - 11 mm wall | Wall | Plasterboard from 75mm, single layer 13mm board | iPASSIVE FR Acrylic 12.5mm deep, to both sides, min annular 10mm | -/60/30 | min seal depth 12.5mm, max seal size 150x150mm / Ø344mm | FAS180387C.1 |
| Mild/Stainless steel, Ø22mm / 3 - 10mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep stone wool 35kg/m3, closed systems only* | -/120/120 | min seal depth 25mm, max seal size 300x300mm | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|--|--------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Pex Ø15mm x 2.5mm wall inner / Ø25mm outer | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture, closed systems only* | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, min 10mm annular | FAS180387C.1 |
| Alupex Ø16- Ø20mm / 2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture, closed systems only* | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, min 10mm annular | FAS180387C.1 |
| Mild/Stainless Steel Ø4mm / 1 - 2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture, closed systems only* | -/90/90 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, min 10mm annular | FAS180387C.1 |
| Mild/Stainless Steel Ø5 - Ø30mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture, closed systems only* | -/90/90 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, min 10mm annular | FAS180387C.1 |
| Mild/Stainless Steel Ø30mm / 2 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, min 10mm annular | FAS180387C.1 |
| Copper/Steel Ø6mm / 0.7 - 3mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture | -/90/60 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, min 10mm annular | FAS180387C.1 |
| Copper/Steel Ø7 - Ø22mm / 0.7 - 11mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture | -/90/30 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, min 10mm annular | FAS180387C.1 |
| Mild/Stainless Steel Ø4 - Ø16mm / 1 - 8mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep stone wool 33kg/m3, pipes fitted at any position within aperture | -/120/120 | min seal depth 25mm, max seal size 300x300mm / Ø300mm, min 10mm annular, min 30mm between penetration seals | FAS180387C.1 |
| Copper/Steel Ø6mm / 0.7 - 3mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep stone wool 33kg/m3, pipes fitted at any position within aperture, closed systems only* | -/120/120 | min seal depth 25mm, max seal size 300x300mm / Ø300mm, min 10mm annular, min 30mm between penetration seals | FAS180387C.1 |
| Copper/Steel Ø6 - Ø15mm / 0.7 - 7.5mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep stone wool 33kg/m3, pipes fitted at any position within aperture, closed systems only* | -/120/60 | min seal depth 25mm, max seal size 300x300mm / Ø300mm, min 10mm annular, min 30mm between penetration seals | FAS180387C.1 |
| Pex Ø15mm x 2.5mm wall inner / Ø25mm outer | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 25mm deep AES mineral fibre, pipes fitted at any position within aperture, closed systems only* | -/90/90 | min seal depth 25mm, max seal size 300x300mm / Ø504mm, min 10mm annular, min seal separation 30mm, 30-80mm thick stone wool insulation 80kg/m3 | FAS180387C.1 |
| Copper up to Ø54mm / 2 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep stone wool 140kg/m3, (single) pipes fitted at any position within aperture | -/120/- | min seal depth 25mm, max seal size 300x300mm | FAS180387C.1 |
| Mild Steel up to Ø16mm / 1.5 - 7.5mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep stone wool 140kg/m3, (single) pipes fitted at any position within aperture | -240/240 | min seal depth 25mm, max seal size 300x300mm | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|--|--------------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Mild Steel up to Ø16mm / 1.5 - 7.5mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep AES mineral fibre (single) pipes fitted at any position within aperture | -/120/120 | min seal depth 25mm, max seal size up to 100x1000mm | FAS180387C.1 |
| Copper/Steel conduit up to Ø16mm | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/- | max seal size 2400 x 1200mm | FAS180387A.1 |
| Steel conduit up to Ø16mm | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| Copper conduit up to Ø16mm | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/45 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| Steel conduit up to Ø16mm | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Copper conduit up to Ø16mm | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Steel conduit up to Ø16mm | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/180/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Copper conduit up to Ø16mm | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/180/30 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Steel conduit up to Ø16mm | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/60 | max seal size 1200 x 2400mm wide, min 25mm separation | FAS180387D.1 |
| Copper conduit up to Ø16mm | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/45 | max seal size 1200 x 2400mm wide, min 25mm separation | FAS180387D.1 |
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -/240/180 | 8-9mm seal width around pipe, min 1000x20mm Stone wool insulation(80kg/m3) | FAS180387C.1 |
| Copper, interrupted, up to Ø12mm / 0.9 - 5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -/240/240 | 8mm seal width around pipe, min 1000x20mm Stone wool insulation(80kg/m3) | FAS180387C.1 |
| Alupex, interrupted, up to Ø75mm / 7.5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -/120/120 | 30mm seal width around pipe, 600x25mm AES fibre insulation | FAS180387C.1 |
| Steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -/180/90 | 6-18mm seal width around pipe, 1000x30mm stone wool insulation(80kg/m3) | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -240/60 | 300x300mm max seal size min 1000x20mm Stone wool insulation(80kg/m3) | FAS180387C.1 |
| Copper, interrupted, up to Ø12mm / 0.9 - 5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -/240/60 | 300x300mm max seal size min 1000x20mm Stone wool insulation(80kg/m3) | FAS180387C.1 |
| Alupex, interrupted , up to Ø75mm / 7.5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -/240/60 | 300x300mm max seal size, 600x25mm AES fibre insulation | FAS180387C.1 |
| Steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m3 stone wool, | -/240/60 | 300x300mm max seal size, 1000x30mm stone wool insulation(80kg/m3) | FAS180387C.1 |
| Steel, continuous, Ø40mm /1-14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 48mm deep AES mineral fibre | -/240/240 | 300x300mm /Ø504mm max seal size, min 10mm annular, 20mm thick stone wool insulation(80kg/m3) | FAS180387C.1 |
| Steel, continuous, Ø40 - Ø300mm / 1 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 48mm deep AES mineral fibre | -/180/180 | 300x300mm / Ø504mm max seal size, min 10mm annular, 30-80mm thick stone wool insulation(80kg/m3) | FAS180387C.1 |
| Steel, interrupted, Ø40 / 1.5- 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides, backed with 20/30mm deep 40kg/m3 stone wool | -/240/240 | 300x300mm max seal size, min 1000x20mm stone wool insulation(80kg/m3) | FAS180387C.1 |
| Steel, interrupted, Ø40 - Ø219mm / 1.5- 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides, backed with 20/30mm deep 40kg/m3 stone wool | -/240/120 | 300x300mm max seal size, min 1000x30mm stone wool insulation(80kg/m3) | FAS180387C.1 |
| Steel, continuous, Ø40 - Ø324mm / 1.5- 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides, backed with 25mm deep 35kg/m3 stone wool | -240/240 | 300x300mm / Ø504mm max seal size, min 10mm annular, 30-80mm thick stone wool insulation(80kg/m3) | FAS180387C.1 |
| Steel, continuous, Ø22mm / 2 - 11mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep 35kg/m3 stone wool, | -/240/180 | 300x300mm / Ø300mm max seal size, min 10mm annular, 13mm thick Elastomeric Insulation | FAS180387C.1 |
| Steel, continuous, Ø22 - Ø114mm / 2 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep 35kg/m3 stone wool, | -/120/90 | 300x300mm / Ø300mm max seal size, min 10mm annular, 13- 25mm thick Elastomeric Insulation | FAS180387C.1 |
| Steel, continuous, Ø22 - Ø114mm / 2 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep 35kg/m3 stone wool, | -/60/60 | 300x300mm / Ø300mm max seal size, min 10mm annular, 25 - 50mm thick Elastomeric Insulation | FAS180387C.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø324mm / 1 - 14.2mm wall | Wall | Plasterboard from 75mm, single layer 13mm board | iPASSIVE FR Acrylic 12.5mm deep, to both sides, 30mm thick stone wool insulation (80kg/m3) | -/60/45 | min seal depth 12.5mm, max seal size 150x150mm / Ø344mm, min 10mm annular | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 20mm deep stone wool (40kg/m3), closed systems only* | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm, 13-19mm Elastomeric Insulation | FAS180387C.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 20mm deep stone wool (40kg/m3), closed systems only* | -/120/60 | min seal depth 25mm, max seal size 300x300mm, 13-19mm Elastomeric Insulation | FAS180387C.1 |
| Copper, continuous, Ø12mm / 1mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep AES mineral fibre, closed systems only* | -/120/120 | min seal depth 25mm, max seal size 300x300mm, 9mm Elastomeric Insulation | FAS180387C.1 |
| Copper, continuous, Ø12 - Ø54mm / 1 - 1.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep AES mineral fibre, closed systems only* | -/120/60 | min seal depth 25mm, max seal size 300x300mm, 9-13mm Elastomeric Insulation | FAS180387C.1 |
| Copper, continuous, Ø12 - Ø54mm / 1 - 1.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep AES mineral fibre, closed systems only* | -/60/60 | min seal depth 25mm, max seal size 300x300mm, 13-25mm Elastomeric Insulation | FAS180387C.1 |
| Alupex, continuous, Ø16mm / 2.25mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep AES mineral fibre, closed systems only* | -/120/120 | min seal depth 25mm, max seal size 300x300mm, 9mm Elastomeric Insulation | FAS180387C.1 |
| Alupex, continuous, Ø16mm - Ø75mm / 2.25 - 4.7mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep AES mineral fibre, closed systems only* | -/60/60 | min seal depth 25mm, max seal size 300x300mm, 9-25mm Elastomeric Insulation | FAS180387C.1 |
| Mild/Stainless steel, continuous, Ø40mm - Ø324mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 35kg/m3, pipes fitted at any position within aperture | -/120/90 | min seal depth 12.5mm, max seal size 300x300mm / Ø504mm, 30-80mm thick stone wool insulation (80kg/m3) | FAS180387C.1 |
| Alupex, continuous or interrupted, Ø16 - Ø75mm / 2.25 - 4.7 mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 12.5mm deep stone wool 40kg/m3, pipes fitted at any position within aperture, closed systems only* | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm, min 10mm annular, 500x 20mm thick stone wool insulation 80kg/m3 (both sides) | FAS180387C.1 |
| Copper, interrupted, up to Ø54mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 20mm deep stone wool 40kg/m3, pipes fitted at any position within aperture | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm, min 10mm annular, 500x 20mm thick stone wool insulation 80kg/m3 (both sides) | FAS180387C.1 |
| Alupex, interrupted, Ø75mm / 7.5 mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 20mm deep stone wool 140kg/m3, pipes fitted at any position within aperture | -/60/60 | min seal depth 12.5mm, max seal size 300x300mm, min 10mm annular, 600x 20mm thick AES mineral fibre insulation | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 20mm deep stone wool 40kg/m3, pipes fitted at any position within aperture | -/120/120 | min seal depth 12.5mm, max seal size 300x300mm, min 10mm annular, 500x 20mm thick stone wool insulation 80kg/m3 | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 20mm deep stone wool 40kg/m3, pipes fitted at any position within aperture | -/120/90 | min seal depth 12.5mm, max seal size 300x300mm, min 10mm annular, 500x 30mm thick stone wool insulation 80kg/m3 | FAS180387C.1 |
| Copper/Steel, continuous, Ø12mm / 0.9 - 6mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep stone wool 33kg/m3, pipes fitted at any position within aperture, closed systems only* | -/240/240 | min seal depth 25mm, max seal size 300x300mm / Ø300mm, min 10mm annular, min 30mm between penetration seals, 20-80mm stone wool insulation 80kg/m3 | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper/Steel, continuous, Ø13-Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep stone wool 33kg/m ³ , pipes fitted at any position within aperture, closed systems only* | -/240/180 | min seal depth 25mm, max seal size 300x300mm / Ø300mm, min 10mm annular, min 30mm between penetration seals, 20-80mm stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Alupex, continuous, Ø16-Ø20mm / 2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep stone wool 33kg/m ³ , pipes fitted at any position within aperture, closed systems only* | -/120/120 | min seal depth 25mm, max seal size 300x300mm / Ø300mm, min 10mm annular, min 30mm between penetration seals, 20-80mm stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/240/180 | 10mm seal width around pipe, min 1000x20mm Stone wool insulation(80kg/m ³) | FAS180387C.1 |
| Copper, interrupted, up to Ø12mm / 0.9 - 5mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/240/240 | 10mm seal width around pipe, min 1000x20mm Stone wool insulation(80kg/m ³) | FAS180387C.1 |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, | -/120/120 | min seal depth 25mm, max seal size up to 100x1000mm, min 1000x20mm Stone wool insulation(80kg/m ³) | FAS180387C.1 |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/90/60 | min seal depth 15mm, max seal size 300x300mm, min 1000x20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Copper, interrupted, up to Ø12mm / 0.9 - 5mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/90/60 | min seal depth 15mm, max seal size 300x300mm, min 1000x20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, | -/120/120 | min seal depth 25mm, max seal size 300x300mm, min 1000x20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/240/240 | min seal depth 15mm, max seal size 10mm around pipe, min 1000x20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/240/90 | min seal depth 15mm, max seal size 10mm around pipe, min 1000x30mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/120/90 | min seal depth 25mm, max seal size up to 100x1000mm, min 1000x20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|--|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/120/90 | min seal depth 25mm, max seal size up to 100x1000mm, min 1000x30mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/90/60 | min seal depth 15mm, max seal size 300x300mm, min 1000x20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/90/60 | min seal depth 15mm, max seal size 300x300mm, min 1000x30mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 20mm deep 40kg/m ³ stone wool, pipes fitted at any position within aperture | -/120/90 | min seal depth 25mm, max seal size 300x300mm, min 1000x30mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 25mm deep AES mineral fibre, pipes fitted at any position within aperture | -/240/240 | min seal depth 25mm, max seal size 300x300mm / Ø504mm, min 10mm annular, min seal separation 30mm, 20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø324mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 25mm deep AES mineral fibre, pipes fitted at any position within aperture | -/240/240 | min seal depth 25mm, max seal size 300x300mm / Ø504mm, min 10mm annular, min seal separation 30mm, 30-80mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Alupex, interrupted, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side or any position in between, backed with 48mm deep AES mineral fibre, pipes fitted at any position within aperture, closed systems only* | -/240/240 | min seal depth 25mm, min 10mm around pipe, max seal size 300x300mm, 500x20mm thick stone wool insulation 80kg/m ³ | FAS180387C.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 20mm deep stone wool 40kg/m ³ , (single) pipes fitted at any position within aperture | -/180/180 | min seal depth 25mm, max seal size 300x300mm, 13-19mm Elastomeric Insulation | FAS180387C.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, (single) pipes fitted at any position within aperture | -/60/60 | min seal depth 25mm, max seal size 300x300mm, 13-19mm Elastomeric Insulation | FAS180387C.1 |
| Copper, continuous, Ø12mm / 1mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, (single) pipes fitted at any position within aperture, closed systems only* | -/240/180 | min seal depth 25mm, max seal size 300x300mm, 9mm Elastomeric Insulation | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|---|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper, continuous, Ø12-Ø54mm / 1 - 1.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, (single) pipes fitted at any position within aperture, closed systems only* | -/180/120 | min seal depth 25mm, max seal size 300x300mm, 9-13mm Elastomeric Insulation | FAS180387C.1 |
| Copper, continuous, Ø12-Ø54mm / 1 - 1.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, (single) pipes fitted at any position within aperture, closed systems only* | -/90/60 | min seal depth 25mm, max seal size 300x300mm, 13-25mm Elastomeric Insulation | FAS180387C.1 |
| Alupex, continuous, Ø16mm / 2.25mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, (single) pipes fitted at any position within aperture, closed systems only* | -180/180 | min seal depth 25mm, max seal size 300x300mm, 9mm Elastomeric Insulation | FAS180387C.1 |
| Alupex, continuous, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, (single) pipes fitted at any position within aperture, closed systems only* | -/120/60 | min seal depth 25mm, max seal size 300x300mm, 9-13mm Elastomeric Insulation | FAS180387C.1 |
| Alupex, continuous, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, (single) pipes fitted at any position within aperture, closed systems only* | -/60/60 | min seal depth 25mm, max seal size 300x300mm, 13-25mm Elastomeric Insulation | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides backed with 25mm deep stone wool 80kg/m3, (single) pipes fitted at any position within aperture, closed systems only* | -/240/240 | min seal depth 15mm, max seal size 300x300mm or 100x1000mm, 1000x30mm thick stone wool insulation 80kg/m3 | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides backed with 20mm deep stone wool 80kg/m3, (single) pipes fitted at any position within aperture | -/240/120 | min seal depth 15mm, max seal size 300x300mm or 100x1000mm, 1000x20mm thick stone wool insulation 80kg/m3 | FAS180387C.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 1200x1200mm, 1000x20mm thick stonewool insulation 80kg/m3 | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 1200 x unlimited width, 1000x30mm stone wool 80kg/m3 | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 1200 x unlimited width, 1000x20mm thick stone wool 80kg/m3, penetration seals min 30mm from edges | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø324mm / 1 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 1200 x unlimited width, 1000x30mm thick stone wool 80kg/m3, penetration seals min 30mm from edges | FAS180387A.1 |
| Copper, continuous or interrupted, up to Ø12mm / 0.9 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 70x70mm, 1000x20mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Copper, continuous or interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/120 | max seal size 115x115mm, 1000x20mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Alupex, continuous or interrupted, up to Ø75mm / 7.5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/120/120 | max seal size 200x200mm, 600x30mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Copper, continuous or interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 1200 x unlimited width, 1000x20mm thick stone wool 80kg/m3 | FAS180387A.1 |
| Alupex, continuous or interrupted, up to Ø75mm / 7.5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/120/90 | max seal size 1200 x unlimited width, 1000x30mm thick stone wool 80kg/m3 | FAS180387A.1 |
| Steel, continuous or interrupted, Ø325mm / 6.35 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/90 | max seal size 1200 x unlimited width, 1000x30mm thick stone wool 80kg/m3 | FAS180387A.1 |
| Mild/stainless steel, continuous or interrupted, Ø40mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 280x280mm, 1000x20mm thick stone wool 80kg/m3 | FAS180387A.1 |
| Mild/stainless steel, continuous or interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 280x280mm, 1000x30mm thick stone wool 80kg/m3 | FAS180387A.1 |
| Mild/stainless steel, continuous or interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 1200mm x unlimited width, 1000x20mm thick stone wool 80kg/m3 | FAS180387A.1 |
| Mild/stainless steel, continuous, Ø165mm / 4.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, iPASSIVE FR Wrap centrally fitted around insulation, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/30 | 1.8mm x 50mm iPASSIVE FR Wrap, 9-25mm kflex elastomeric insulation | FAS180387A.1 |
| Mild/stainless steel, continuous, Ø165mm / 4.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/60 | 30mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided fitted together within the floor, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/180 | max seal size 600x1200mm, 20mm thick insulation | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided fitted together within the floor, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 280x280mm, 20mm thick insulation | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided fitted together within the floor, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/120 | max seal size 2400x1200mm, 20mm thick insulation | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40 - 219mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided fitted together within the floor, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/60 | max seal size 2400x1200mm, 30mm thick insulation | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper, interrupted, up to Ø12mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/30 | max seal size 600x1200mm, 20mm thick stone wool insulation 80kg/m ³ | FAS180387A.1 |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 600x1200mm, 20mm thick stone wool insulation 80kg/m ³ | FAS180387A.1 |
| Copper, interrupted, up to Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/120 | max seal size 2400x1200mm, 20mm thick stone wool insulation 80kg/m ³ | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø114mm / 11-14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/240/- | max seal size 600x1200mm | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø114mm / 11-14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/120/- | max seal size 2400x1200mm | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 600x1200mm, 30mm thick stone wool insulation 80kg/m ³ | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/90 | max seal size 2400x1200mm, 30mm thick stone wool insulation 80kg/m ³ | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø165mm / 4.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, iPASSIVE FR Wrap fitted around pipe insulation, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/30 | max seal size 2400x1200mm, 3.6x50mm iPASSIVE FR Wrap around pipe, 13mm thick kflex Elastomeric insulation | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø165mm / 4.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, iPASSIVE FR Wrap fitted around pipe insulation, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/90 | max seal size 2400x1200mm, 3.6x50mm iPASSIVE FR Wrap around pipe, 19mm thick kflex Elastomeric insulation | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø165mm / 4.5 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/60 | max seal size 2400x1200mm, 25-40mm thick stone wool insulation 80kg/m ³ | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, iPASSIVE FR Wrap fitted around pipe at soffit, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/120 | max seal size 2400x1200mm, 1.8x50mm iPASSIVE FR Wrap around pipe, 13mm thick kflex Elastomeric insulation | FAS180387A.1 |
| Copper, continuous, Ø12 - Ø54mm / 1 - 1.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided (2 layers) fitted together either side, iPASSIVE FR Wrap fitted around pipe insulation at bottom of seal, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/2404/60 | max seal size 2400x1200mm, 3.6x50mm iPASSIVE FR Wrap around pipe, 9-13mm thick kflex Elastomeric insulation | FAS180387A.1 |
| Copper, continuous, Ø12 - Ø54mm / 1 - 1.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided (2 layers) fitted together either side, iPASSIVE FR Wrap fitted around pipe insulation at bottom of seal, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/180/30 | max seal size 2400x1200mm, 3.6x50mm iPASSIVE FR Wrap around pipe, 13-25mm thick kflex Elastomeric insulation | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Mild/Stainless steel, continuous, Ø4 - Ø324mm / 0.7 - 14.2mm wall | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 600x1200mm wide, 20-30mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø324mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/120 | min seal/edge separation 30mm, 20-80mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø324mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, iPASSIVE FR Wrap fitted around pipe insulation, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/90 | min seal/edge separation 30mm, 3 layers 1.8x50mm iPASSIVE FR Wrap around pipe, 32-50mm thick k-flex elastomeric insulation | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, iPASSIVE FR Wrap fitted centrally around pipe insulation, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/120 | 1.8x50mm iPASSIVE FR Wrap around pipe, 13mm thick kflex st insulation | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, 2x iPASSIVE FR Wrap fitted flush to each face of seal around pipe insulation, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/60 | 2x 1.8x50mm iPASSIVE FR Wrap around pipe, 13-32mm thick kflex insulation | FAS180387A.1 |
| Copper, interrupted, up to Ø54mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/120/120 | 500x20mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Alupex Ø75mm / 7.5mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | 600x25mm thick AES mineral fibre insulation | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø114mm / 11mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/- | No insulation | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/120 | 500x20mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/90 | 500x30mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |
| Copper, continuous, Ø12mm / 1 mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, iPASSIVE FR Wraps fitted around pipes to both sides of seal, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/120/120 | 3.6x50mm iPASSIVE FR Wrap fitted to both sides of seal, 9mm Kflex Elastomeric insulation | FAS180387A.1 |
| Copper, continuous, Ø12 - Ø54mm / 1 - 1.2 mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, iPASSIVE FR Wraps fitted around pipes to both sides of seal, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/120/90 | 3.6x50mm iPASSIVE FR Wrap fitted to both sides of seal, 9-13mm Kflex Elastomeric insulation | FAS180387A.1 |
| Copper, continuous, Ø12 - Ø54mm / 1 - 1.2 mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, iPASSIVE FR Wraps fitted around pipes to both sides of seal, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/120/60 | 3.6x50mm iPASSIVE FR Wrap fitted to both sides of seal, 13-25mm Kflex Elastomeric insulation | FAS180387A.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø324mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 2-sided to either side, iPASSIVE FR Collars fitted with penetrating threaded rod & nuts, Cables& trays coated 150mm each side, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/60 | max seal size 600x1200mm wide, 20-30mm thick stone wool insulation 80kg/m3 | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Steel, single, continuous, Ø219mm / 5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/120/90 | max seal size 1200x2400mm wide, 30mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Copper, interrupted, up to Ø12mm / 0.9 - 5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing, closed systems only* | -/240/240 | max seal size 70x70mm wide, 1000x20mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Copper, interrupted, up to Ø54mm / 1 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing, closed systems only* | -/240/120 | max seal size 115x115mm wide, 1000x20mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Copper, interrupted, up to Ø54mm / 1 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing, closed systems only* | -/180/120 | max seal size 1200x2400mm wide, 1000x20mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Alupex Ø75mm / 7.5mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing, closed systems only* | -/60/60 | max seal size 1200x2400mm wide, 600x32mm elastomeric insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/240/240 | max seal size 100x100mm, 1000x20mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing, | -/120/90 | max seal size 1200x2400mm wide, 1000x30mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted centrally | -/240/240 | max seal size 1200x2400mm wide, min 10mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted centrally, 13mm Elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø165mm / 4.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted centrally | -/240/240 | max seal size 1200x2400mm wide, min 10mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted centrally, 13mm Elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted centrally | -/240/60 | max seal size 1200x2400mm wide, min 10mm seal separation, 1.8x50mm iPASSIVE FR Wrap fitted centrally, 13-19mm Elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted centrally | -/180/60 | max seal size 1200x2400mm wide, min 10mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted centrally, 13-25mm Elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40 / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/240/240 | max seal size 1200x2400mm wide, min 20mm seal separation, 1000x20mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/240/120 | max seal size 1200x2400mm wide, min 20mm seal separation, 1000x30mm stone wool insulation 80kg/m3 | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|---|------------|---|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper, interrupted, up to Ø12mm / 1 - 5mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing, closed systems only* | -/2450/240 | max seal size 70x70mm, 1000x20mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Copper, interrupted, up to Ø54mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing, closed systems only* | -/240/180 | max seal size 115x115mm, 1000x20mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Copper, interrupted, up to Ø54mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing, closed systems only* | -/180/180 | max seal size 1200x2400mm, 1000x20mm stone wool insulation 80kg/m3, min 30mm seal separation | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40 / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg/m3 backing | -/240/240 | max seal size 280x280mm, min 30mm seal separation, 1000x20mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150k /m3 backing | -/240/90 | max seal size 280x280mm, min 30mm seal separation, 1000x30mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40 / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg/m3 backing | -/180/180 | max seal size 1200x2400mm, min 30mm seal separation, 1000x20mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg/m3 backing | -/180/90 | max seal size 1200x2400mm, min 30mm seal separation, 1000x30mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 140kg/m3 backing | -/240/240 | max seal size 550x1100mm, min 30mm seal separation, 20mm thick stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 140kg/m3 backing | -/180/180 | max seal size 1200x2400mm, min 30mm seal separation, 20mm thick stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø219mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 140kg/m3 backing | -/240/240 | max seal size 550x1100mm, min 30mm seal separation, 30-80mm thick stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø219mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 140kg/m3 backing | -/180/180 | max seal size 1200x2400mm, min 30mm seal separation, 30-80mm thick stone wool insulation 80kg/m3 | FAS180387D.1 |
| Copper, continuous, Ø12mm / 1mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wrap fitted at soffit, closed systems only* | -/240/240 | max seal size 1200x2400mm, min 25mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted to soffit, 9mm elastomeric insulation | FAS180387D.1 |
| Copper, continuous, Ø12-Ø54mm / 1 - 1.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wrap fitted at soffit, closed systems only* | -/240/60 | max seal size 1200x2400mm, min 25mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted to soffit, 13-25mm elastomeric insulation | FAS180387D.1 |
| PEX, continuous, Ø16mm / 2.25mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wrap fitted at soffit, closed systems only* | -/240/240 | max seal size 1200x2400mm, min 30mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted to soffit, 9mm elastomeric insulation | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|---|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| PEX, continuous, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wrap fitted at soffit, closed systems only* | -/240/90 | max seal size 1200x2400mm, min 30mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted to soffit, 9-13mm elastomeric insulation | FAS180387D.1 |
| PEX, continuous, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wrap fitted at soffit, closed systems only* | -/180/90 | max seal size 1200x2400mm, min 30mm seal separation, 3.6x50mm iPASSIVE FR Wrap fitted to soffit, 13-25mm elastomeric insulation | FAS180387D.1 |
| Steel, interrupted, up to Ø16mm / 1.5 - 7mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side, closed systems only* | -/240/120 | max seal size 1200x2400mm, min 30mm seal separation | FAS180387D.1 |
| Copper, interrupted, up to Ø54mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side, closed systems only* | -/120/120 | max seal size 1200x2400mm, min 30mm seal separation | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/240/240 | max seal size 1200x2400mm, min 30mm seal separation, 1000x20mm stone wool insulation 80kg/m ³ | FAS180387D.1 |
| Mild/Stainless steel, interrupted, Ø40 - Ø219mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/240/120 | max seal size 1200x2400mm, min 30mm seal separation, 1000x30mm stone wool insulation 80kg/m ³ | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side, iPASSIVE FR Wrap fitted at bottom of seal | -/180/180 | max seal size 1200x2400mm, min 30mm seal separation, 1.8x50mm iPASSIVE FR Wrap, 13mm elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1.5 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side, iPASSIVE FR Wrap fitted at bottom of seal | -/180/120 | max seal size 1200x2400mm, min 30mm seal separation, 1.8x50mm iPASSIVE FR Wrap, 13-19mm elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side, iPASSIVE FR Wrap fitted either side | -/240/240 | max seal size 1200x2400mm, min 30mm seal separation, 3.6x50mm iPASSIVE FR Wrap, 25mm elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø324mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side, iPASSIVE FR Wrap fitted either side | -/240/120 | max seal size 1200x2400mm, min 30mm seal separation, 3.6x50mm iPASSIVE FR Wrap, 25mm elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø324mm / 1 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side, iPASSIVE FR Wrap fitted either side | -/120/120 | max seal size 1200x2400mm, min 30mm seal separation, 5.4x50mm iPASSIVE FR Wrap, 25-50mm elastomeric insulation | FAS180387D.1 |
| PEX, interrupted, Ø16mm / 2.25mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to bottom side, 50mm stone wool backing 150kg/m ³ , closed systems only* | -/240/240 | max seal size 135x135mm, min 10mm seal separation from edges, 500x20mm stone wool insulation 80kg/m ³ | FAS180387D.1 |
| PEX, interrupted, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to bottom side, 50mm stone wool backing 150kg/m ³ , closed systems only* | -/240/180 | max seal size 135x135mm, min 10mm seal separation from edges, 500x20mm stone wool insulation 80kg/m ³ | FAS180387D.1 |
| PEX, interrupted, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to bottom side, 50mm stone wool backing 150kg/m ³ , closed systems only* | -/180/180 | max seal size 2400x1200mm, min 10mm seal separation from edges, 500x20mm stone wool insulation 80kg/m ³ | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|--|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Copper/Steel, continuous, Ø6mm / 0.7 - 3mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool backing 150kg/m3 | -/180/120 | max seal size 2400x1200mm, min 30mm seal separation | FAS180387D.1 |
| Copper/Steel, continuous, Ø7- Ø15mm / 0.9 - 7.5mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool backing 150kg/m3 | -/180/30 | max seal size 2400x1200mm, min 30mm seal separation | FAS180387D.1 |
| Copper/Steel, continuous, Ø12- Ø54mm / 0.7 - 14.2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool backing 150kg/m3, closed systems only* | -/180/120 | max seal size 2400x1200mm, min 30mm seal separation, 20-80mm stone wool insulation 150kg/m3 | FAS180387D.1 |
| Steel, continuous, Ø4 - Ø16mm / 1 - 8mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool backing 150kg/m3 | -/180/180 | max seal size 2400x1200mm, min 30mm seal separation | FAS180387D.1 |
| Alupex, Ø16 - Ø20mm / 2mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool backing 150kg/m3, closed systems only* | -/180/180 | max seal size 2400x1200mm, min 30mm seal separation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing or iPASSIVE EX Mortar 50mm to both sides with no backing, iPASSIVE FR Wraps fitted flush to both sides | -/120/120 | max seal size 2400x1200mm, min 30mm seal separation, 2x 1.8x50mm iPASSIVE FR Wrap, 13mm elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing or iPASSIVE EX Mortar 50mm to both sides with no backing, iPASSIVE FR Wraps fitted flush to both sides | -/120/60 | max seal size 2400x1200mm, min 30mm seal separation, 2x 1.8x50mm iPASSIVE FR Wrap, 13mm elastomeric insulation | FAS180387D.1 |
| Copper, interrupted, up to Ø54mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing, closed systems only* | -/120/120 | max seal size 2400x1200mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Alupex, interrupted, Ø75mm / 7.5mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/60/60 | max seal size 2400x1200mm, min 30mm seal separation, min 600x25mm AES insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/120 | max seal size 2400x1200mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø219mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/90 | max seal size 2400x1200mm, min 30mm seal separation, min 500x30mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| PEX, interrupted, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing, closed systems only* | -/120/120 | max seal size 2400x1200mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m3 | FAS180387D.1 |
| Copper/Steel, continuous, Ø12- Ø54mm / 0.7 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing, iPASSIVE FR Wrap fitted flush to both sides, closed systems only* | -/120/120 | max seal size 2400x1200mm, min 30mm seal separation, 2x 3.6x50mm iPASSIVE FR Wrap, 9-25mm elastomeric insulation | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|---|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| PEX, interrupted, Ø16 - Ø75mm / 2.25 - 4.7mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m ³ backing, iPASSIVE FR Wrap fitted flush to both sides, closed systems only* | -/120/120 | max seal size 2400x1200mm, min 30mm seal separation, 2x 3.6x50mm iPASSIVE FR Wrap, 9-25mm elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, continuous, Ø40 - Ø165mm / 1 - 14.2mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 50mm both sides, iPASSIVE FR Wrap fitted flush to both sides | -/120/60 | max seal size 2400x1200mm, min 30mm seal separation, 2x 3.6x50mm iPASSIVE FR Wrap, 13-32mm elastomeric insulation | FAS180387D.1 |
| Mild/Stainless steel, Ø4 - Ø22mm / 1 - 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Mild/Stainless steel, Ø23 - Ø30mm / 2 - 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Alupex, Ø16mm / 2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Alupex, Ø17-Ø20mm / 2 - 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/120/90 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Copper/Steel, Ø7- Ø15mm | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Copper/Steel, Ø6mm | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Copper/Steel, Ø7 - Ø12mm / 0.6 - 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/120/60 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Mild/Stainless steel, interrupted, up to Ø40mm / 1- 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/120/120 | max annular 10mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Mild/Stainless steel, interrupted, Ø40- Ø324mm / 1- 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/120/120 | max annular 10mm, min 30mm seal separation, min 500x30mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Copper/Steel, interrupted, up to Ø54mm / 1.2 - 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/90/60 | max annular 10mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Mild/Stainless steel, continuous, up to Ø40mm / 1- 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/120/120 | max annular 10mm, min 30mm seal separation, 20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Mild/Stainless steel, continuous, Ø40- Ø324mm / 1- 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/90/60 | max annular 10mm, min 30mm seal separation, 30-80mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Copper/Steel, continuous, up to Ø12mm / 0.7 - 6mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/90/60 | max annular 10mm, min 30mm seal separation, 20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Copper/Steel, continuous, up to Ø54mm / 1.2 - 14.2mm wall | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides, closed systems only* | -/90/60 | max annular 10mm, min 30mm seal separation, 30-80mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Mild/Stainless steel, Ø4mm / 1mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to bottom side | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|--|--------------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | |
| Mild/Stainless steel, Ø5 - Ø30mm / 1- 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to bottom side | -/120/45 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Copper/Steel, Ø6mm / 0.6mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to bottom side, closed systems only* | -/120/90 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Copper/Steel, Ø7 - Ø12mm / 0.6 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to bottom side, closed systems only* | -/120/30 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Mild/Stainless steel, up to Ø22mm / 1.2 - 11mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Copper/Steel, Ø6mm | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side, closed systems only* | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Copper/Steel, Ø7 - Ø10mm / 0.6 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side, closed systems only* | -/120/90 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Mild/Stainless steel, interrupted, up to Ø40mm / 1- 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/240/240 | max annular 10mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Mild/Stainless steel, interrupted, Ø41 - Ø324mm / 1- 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/240/60 | max annular 10mm, min 30mm seal separation, min 500x30mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Copper/Steel, interrupted, up to Ø12mm / 0.9mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side, closed systems only* | -/240/240 | max annular 10mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Copper/Steel, interrupted, up to Ø13-Ø54mm / 0.9 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side, closed systems only* | -/240/60 | max annular 10mm, min 30mm seal separation, min 500x20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Mild/Stainless steel, continuous, up to Ø40mm / 1- 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/240/240 | max annular 10mm, min 30mm seal separation, 20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Mild/Stainless steel, continuous, Ø40-Ø324mm / 1- 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/240/240 | max annular 10mm, min 30mm seal separation, 30-80mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Copper/Steel, continuous, up to Ø12mm / 0.7 - 6mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side, closed systems only* | -/240/240 | max annular 10mm, min 30mm seal separation, 20mm stone wool insulation 80kg/m ³ | FAS180387E.1 |
| Copper/Steel, continuous, up to Ø54mm / 1.2 - 14.2mm wall | Floor | Concrete, Aerated Concrete, Masonry from 100mm, floor may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side, closed systems only* | -/240/240 | max annular 10mm, min 30mm seal separation, 30-80mm stone wool insulation 80kg/m ³ | FAS180387E.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|---------|---|--------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/90/60 | Ø32mm-Ø50mm with wall thickness 1.2 - 3.7mm | FAS180387B.1 |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/60/60 | Ø55mm-Ø140mm with wall thickness 2.7 - 6.6mm | FAS180387B.1 |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/90/90 | Ø160mm with wall thickness 3.2 - 9.5mm | FAS180387B.1 |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/60/60 | Ø315mm with wall thickness 9.2mm | FAS180387B.1 |
| PVC | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/90/60 | Ø32mm-Ø50mm with wall thickness 1.2 - 3.7mm | FAS180387B.1 |
| PVC | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/60/60 | Ø55mm-Ø140mm with wall thickness 2.7 - 6.6mm | FAS180387B.1 |
| PVC | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/90/90 | Ø160mm with wall thickness 3.2 - 9.5mm | FAS180387B.1 |
| PVC | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/60/60 | Ø315mm with wall thickness 9.2mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/90/60 | Ø32mm-Ø50mm with wall thickness 3 - 5.6mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/60/60 | Ø55mm-Ø160mm with wall thickness 3.4 - 9.5mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/60/60 | Ø200mm-Ø250mm with wall thickness 18.2 - 22.7mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/90/30 | Ø32mm-Ø90mm with wall thickness 3 - 10mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/90/60 | Ø110mm-Ø140mm with wall thickness 3.4 - 14.6mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/90/90 | Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PE | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no aperture lining required, closed systems only* | -/90/60 | Ø32mm-Ø50mm with wall thickness 3 - 5.6mm | FAS180387B.1 |
| PE | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no aperture lining required, closed systems only* | -/60/60 | Ø55mm-Ø160mm with wall thickness 3.4 - 9.5mm | FAS180387B.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|--|-----------|---|--------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PE | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no aperture lining required, closed systems only* | -/60/60 | Ø200mm-Ø250mm with wall thickness 18.2 - 22.7mm | FAS180387B.1 |
| PE | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/90/30 | Ø32mm-Ø90mm with wall thickness 3 - 10mm | FAS180387B.1 |
| PE | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/90/60 | Ø110mm-Ø140mm with wall thickness 3.4 - 14.6mm | FAS180387B.1 |
| PE | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/90/90 | Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/90/60 | Ø32mm-Ø110mm with wall thickness 3 - 6.3mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/60/60 | Ø125mm-Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/90/60 | Ø32mm-Ø110mm with wall thickness 1.8 - 6.6mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 100mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/60/60 | Ø125mm-Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PP | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no aperture lining required, closed systems only* | -/90/60 | Ø32mm-Ø110mm with wall thickness 3 - 6.3mm | FAS180387B.1 |
| PP | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no aperture lining required, closed systems only* | -/60/60 | Ø125mm-Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PP | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/90/60 | Ø32mm-Ø110mm with wall thickness 1.8 - 6.6mm | FAS180387B.1 |
| PP | Wall | Plasterboard from 100mm, wall may be reduced to 75mm & single layer 13mm board for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/60/60 | Ø125mm-Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, no lining of aperture required | -/240/180 | Ø32mm-Ø50mm with wall thickness 2 - 3.7mm | FAS180387B.1 |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/180/180 | Ø55mm-Ø110mm with wall thickness 2.7 - 6.6mm | FAS180387B.1 |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/240/240 | Ø125mm-Ø160mm with wall thickness 4 - 9.5mm | FAS180387B.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|--|-----------|--|--------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PVC | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/120/120 | Ø315mm with wall thickness 9.2mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/240/240 | Ø32mm-Ø50mm with wall thickness 3 - 4.6mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/240/180 | Ø55mm-Ø110mm with wall thickness 3.4mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/180/180 | Ø125mm-Ø160mm with wall thickness 4.9 - 9.5mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/60/60 | Ø200mm with wall thickness 18.2mm | FAS180387B.1 |
| PE | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/120/90 | Ø250mm with wall thickness 22.7mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/240/240 | Ø32mm-Ø110mm with wall thickness 1.6 - 10mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed, closed systems only* | -/240/180 | Ø125mm-Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/240/240 | Ø32mm-Ø50mm with wall thickness 1.6 - 5.5mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/240/60 | Ø55mm-Ø140mm with wall thickness 2.7 - 10mm | FAS180387B.1 |
| PP | Wall | Concrete, Aerated Concrete, Masonry from 150mm, wall may be reduced to 75mm for derated FRL | iPASSIVE FR Collar to both sides, tested oversize, angled penetrations allowed | -/240/180 | Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PVC | Floor | Concrete, Aerated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed, closed systems only* | -/120/120 | Ø32mm-Ø160mm with wall thickness 2 - 9.5mm | FAS180387B.1 |
| PVC | Floor | Concrete, Aerated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed | -/90/60 | Ø32mm-Ø50mm with wall thickness 1.9 - 3.7mm | FAS180387B.1 |
| PVC | Floor | Concrete, Aerated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed | -/60/60 | Ø55mm-Ø160mm with wall thickness 3.2 - 9.5mm | FAS180387B.1 |
| PE | Floor | Concrete, Aerated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed, closed systems only* | -/120/120 | Ø32mm-Ø140mm with wall thickness 3 - 14.7mm | FAS180387B.1 |
| PE | Floor | Concrete, Aerated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed, closed systems only* | -/180/120 | Ø140mm with wall thickness 4.9 - 14.7mm | FAS180387B.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|--------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PE | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed | -/60/60 | Ø32mm-Ø160mm with wall thickness 3 - 14.6mm | FAS180387B.1 |
| PP | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed, closed systems only* | -/120/120 | Ø32mm-Ø110mm with wall thickness 1.9 - 6.6mm | FAS180387B.1 |
| PP | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed, closed systems only* | -/120/120 | Ø125mm-Ø140mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PP | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed, closed systems only* | -/180/180 | Ø160mm with wall thickness 4.9 - 14.6mm | FAS180387B.1 |
| PP | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed | -/120/120 | Ø32mm-Ø50mm with wall thickness 1.8 - 4.6mm | FAS180387B.1 |
| PP | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Collar to soffit of floor, tested oversize, angled penetrations allowed | -/60/60 | Ø55mm-Ø110mm with wall thickness 2.7 - 6.6mm | FAS180387B.1 |
| PP | Wall | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep stone wool 35 kg/m3 | -/180/180 | Ø32mm / 2 - 4.4mm wall thickness, 300x300mm / Ø300mm max seal size, min 10mm annular | FAS180387C.1 |
| PE | Wall | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 75mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm deep stone wool 35 kg/m3 | -/240/240 | Ø20- Ø32mm / 2 mm wall thickness, 300x300mm / Ø300mm max seal size, min 10mm annular | FAS180387C.1 |
| PVC | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, single pipes, pipes fitted at any position within aperture, closed systems only* | -/90/90 | min 10mm annular, Ø52mm max aperture | FAS180387C.1 |
| PP | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, single pipes, pipes fitted at any position within aperture, closed systems only* | -/90/90 | min 29mm annular, Ø90mm max aperture | FAS180387C.1 |
| PP | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep AES mineral fibre, pipes fitted at any position within aperture, closed systems only* | -/120/120 | Ø40mm / 3 mm wall, min seal depth 25mm, min 10mm annular, | FAS180387C.1 |
| PP | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep stone wool 140kg/m3, pipes fitted at any position within aperture, closed systems only* | -/180/180 | Ø75mm / 2.8mm wall, min seal depth 25mm, min 10mm annular, | FAS180387C.1 |
| PE | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to both sides backed with 25mm deep stone wool 140kg/m3, pipes fitted at any position within aperture, closed systems only* | -/240/240 | Ø40mm / 4 mm wall, min seal depth 25mm, min 10mm annular, | FAS180387C.1 |
| PVC conduit up to Ø16mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/180 | max seal size 1200mm x unlimited width, penetration seal min 25mm from edges, min 30mm separation | FAS180387A.1 |
| PVC conduit up to Ø16mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/90 | max seal size 2400 x 1200mm | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|---|-----------|---|--------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PVC conduit up to Ø16mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 2400 x 1200mm | FAS180387A.1 |
| PVC-u, Ø110mm / 3.4mm wall | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 50mm 2-sided fitted mid depth, iPASSIVE FR Wraps fitted around pipes,perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/90/90 | max seal size 2400 x 1200mm, 3.6x50mm(2 layers) iPASSIVE FR Wrap, | FAS180387A.1 |
| uPVC Ø6mm / 1mm wall | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 600x1200mm wide, min 30mm seal separation | FAS180387A.1 |
| uPVC Ø32mm / 1.8mm wall | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 600x1200mm wide, min 30mm seal separation | FAS180387A.1 |
| PVC conduit up to Ø16mm | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| PVC-U Ø315mm / 9.2mm wall | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, iPASSIVE FR Wraps fitted around pipes, perimeter edges sealed with iPASSIVE FR Acrylic, closed systems only* | -/30/30 | 18x75mm iPASSIVE FR Wrap fitted centrally around pipe | FAS180387A.1 |
| PVC conduit up to Ø16mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| PVC conduit up to Ø16mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/120/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| PVC-U, Ø315mm / 9.2mm wall | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted centrally around pipes, closed systems only* | -/120/120 | max seal size 1200 x 2400mm wide, min 10mm seal separation, 18x75mm iPASSIVE FR Wrap fitted centrally | FAS180387D.1 |
| PVC-U, up to Ø32mm / 1.6 - 2.4mm wall | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, closed systems only* | -/120/120 | max seal size 1200 x 2400mm wide, min 30mm seal separation | FAS180387D.1 |
| PE, up to Ø32mm / 1.8 - 3mm wall | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, closed systems only* | -/120/120 | max seal size 1200 x 2400mm wide, min 30mm seal separation | FAS180387D.1 |
| PP, up to Ø32mm / 1.9 - 3.4mm wall | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, closed systems only* | -/120/120 | max seal size 1200 x 2400mm wide, min 30mm seal separation | FAS180387D.1 |
| PVC conduit up to Ø16mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/180 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| PVC conduit up to Ø16mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/180/180 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| PVC-U, up to Ø40mm / 1.8 - 3.7mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted to bottom of seal | -/180/120 | max seal size 1200 x 2400mm, min 30mm separation, 1.8x50mm iPASSIVE FR Wrap | FAS180387D.1 |
| PVC-U, up to Ø160mm / 4.5mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted to bottom of seal, closed systems only* | -/240/240 | max seal size 1200 x 2400mm, min 30mm separation, up to 10.8x50mm iPASSIVE FR Wrap | FAS180387D.1 |
| PP, up to Ø50mm / 2.5 - 5.5mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted to bottom of seal | -/240/240 | max seal size 1200 x 2400mm, min 30mm separation, 3.6x50mm iPASSIVE FR Wrap | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|--|-----------|--|--------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PP, up to Ø75mm / 3.5 - 5.5mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted to bottom of seal | -/240/240 | max seal size 1200 x 2400mm, min 30mm separation, 3.6x50mm iPASSIVE FR Wrap | FAS180387D.1 |
| PE, up to Ø250mm / 7.8mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm to either side, iPASSIVE FR Wraps fitted to bottom of seal | -/180/180 | max seal size 1200 x 2400mm, min 30mm separation, up to 12.6x75mm iPASSIVE FR Wrap | FAS180387D.1 |
| PP, Ø40mm / 3mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg/m ³ backing, closed systems only* | -/120/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| PE, Ø40mm / 4mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg/m ³ backing, closed systems only* | -/120/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| PE, Ø110mm / 4.3mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, iPASSIVE FR Wrap, 50mm stone wool 150kg/m ³ backing, closed systems only* | -/60/60 | max seal size 1200 x 2400mm, min 30mm separation, 2x50mm iPASSIVE FR Wrap | FAS180387D.1 |
| PVC-U, Ø16 - Ø40mm / 1.6 - 3.4mm wall | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to bottom side, 50mm stone wool 150kg/m ³ backing, closed systems only* | -/120/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| PVC conduit up to Ø16mm | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m ³ backing | -/120/120 | max seal size 1200 x 2400mm wide, min 25mm separation | FAS180387D.1 |
| PVC-U, up to Ø32mm / 1.6 - 2.4mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 140kg /m ³ backing, closed systems only* | -/120/120 | max seal size 1200 x 2400mm wide, min 30mm separation | FAS180387D.1 |
| PE, up to Ø32mm / 1.8 - 3mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 140kg /m ³ backing, closed systems only* | -/120/120 | max seal size 1200 x 2400mm wide, min 30mm separation | FAS180387D.1 |
| PP, up to Ø32mm / 1.9 - 4.4mm wall | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 140kg /m ³ backing, closed systems only* | -/120/120 | max seal size 1200 x 2400mm wide, min 30mm separation | FAS180387D.1 |
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Single cables up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic either side or any position in between with stone wool backing min 35kg/m ³ density, min annular 7mm, cables fitted at any position within aperture | -/240/90 | min seal depth 25mm, max seal size Ø87mm, min 48mm backing | FAS180387C.1 |
| Single cables up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic either side or any position in between with stone wool backing min 35kg/m ³ density, min annular 7mm, cables fitted at any position within aperture | -/240/60 | min seal depth 25mm, max seal size 300x300mm, min 48mm backing | FAS180387C.1 |
| Single cables up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic either side or any position in between with stone wool backing min 35kg/m ³ density, min annular 7mm, cables fitted at any position within aperture | -/240/120 | min seal depth 25mm, max seal size 35x35mm/ Ø36mm, min 48mm backing | FAS180387C.1 |
| Cables, single or bundled up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic to both sides with stone wool backing min 35kg/m ³ density, min annular 10mm, cables fitted at any position within aperture | -/240/120 | min seal depth 15mm, max seal size 300x300mm, min 25mm thick backing | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|--|-----------|--|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables, single or bundled Ø22-Ø80mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic to both sides with stone wool backing min 35kg/m ³ density, min annular 10mm, cables fitted at any position within aperture | -/120/60 | min seal depth 15mm, max seal size 300x300mm, min 25mm thick backing | FAS180387C.1 |
| Cables, single or bundled up to Ø80mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic to both sides with stone wool backing min 35kg/m ³ density, min annular 10mm, cables fitted at any position within aperture | -240/60 | min seal depth 25mm, max seal size 300x300mm, min 48mm thick backing | FAS180387C.1 |
| Cables, single up to Ø21mm or in bundle up to Ø100mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Acrylic to both sides with stone wool backing min 35kg/m ³ density, min annular 10mm, cables fitted at any position within aperture | -240/240 | min seal depth 25mm, max seal size 300x300mm, min 48mm thick backing | FAS180387C.1 |
| Single cables up to Ø21mm | Wall | Plasterboard from 75mm, single layer 13mm board | iPASSIVE FR Acrylic 12.5mm deep, to both sides, cables fitted at any position within aperture | -/60/45 | min seal depth 12.5mm, max seal size 150x150mm / Ø344mm, min 10mm annular | FAS180387C.1 |
| Cables, single up to Ø21mm or in bundle up to Ø100mm | Wall | Plasterboard from 75mm, single layer 13mm board | iPASSIVE FR Acrylic 12.5mm deep, to both sides, cables fitted at any position within aperture | -/45/30 | min seal depth 12.5mm, max seal size 150x150mm / Ø344mm, min 10mm annular | FAS180387C.1 |
| Cables, single up to Ø21mm or in bundle up to Ø100mm | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 20mm deep stone wool 40kg/m ³ , cables fitted at any position within aperture | -/120/120 | min seal depth 25mm, max seal size 300x300mm | FAS180387C.1 |
| Cables, single up to Ø80mm or in bundle up to Ø100mm | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 25mm deep, to both sides, backed with 25mm AES Mineral fibre, cables fitted at any position within aperture | -/120/60 | min seal depth 25mm, max seal size 300x300mm | FAS180387C.1 |
| Single 'e-cable' 1x185mm ² core HD603.3 with PVC sheath & insulation | Wall | Plasterboard from 100mm | iPASSIVE FR Acrylic 12.5mm deep, to both sides, backed with 20mm deep stone wool 140kg/m ³ , cables fitted at any position within aperture | -/120/60 | min seal depth 12.5mm, max seal size 300x300mm | FAS180387C.1 |
| Single cables up to Ø21mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to either side, backed with 25mm deep AES mineral fibre, cables fitted at any position within aperture | -/120/60 | min seal depth 25mm, max aperture Ø82mm or 100x1000mm, min 30mm from edges | FAS180387C.1 |
| Single cables up to Ø21mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep AES mineral fibre , cables fitted at any position within aperture, | -/120/90 | min seal depth 25mm, max seal size 300x300mm, min 10mm annular | FAS180387C.1 |
| Single cable 1x185mm ² core with PVC sheath & insulation Ø23-Ø27mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep, to top side, backed with 48mm deep AES mineral fibre , cables fitted at any position within aperture, | -240/240 | min seal depth 25mm, max seal size 300x300mm, min 10mm annular | FAS180387C.1 |
| Cables, single or bundled up to Ø21mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides, backed with 25mm deep stone wool 35kg/m ³ | -/120/120 | min seal depth 15mm, max aperture 300x300mm, min 7mm annular | FAS180387C.1 |
| Cables, single or bundled Ø22-Ø50mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides, backed with 25mm deep stone wool 35kg/m ³ | -/120/90 | min seal depth 15mm, max aperture 300x300mm, min 7mm annular | FAS180387C.1 |
| Cables, single or bundled Ø51-Ø80mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep, to both sides, backed with 25mm deep stone wool 35kg/m ³ | -/120/60 | min seal depth 15mm, max aperture 300x300mm, min 7mm annular | FAS180387C.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|---|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Single cables up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 1200mm x unlimited width, penetration seal min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Cables, single or bundled up to Ø21mm, with/without trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 1200mm x unlimited width, penetration seal min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/60 | max seal size 1200mm x unlimited width, penetration seal min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/120 | max seal size 1200mm x unlimited width, penetration seal min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Steel cable trays/ladders | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/60 | max seal size 1200mm x unlimited width, penetration seal min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Single cables up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 1200mm x unlimited width, penetration seal min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Single HD603.3, 5x1.5mm ² core with PVC sheath & insulation / Ø14mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 70x70mm, penetration seals min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Single HD22.4, 5x1.5mm ² core with PO sheath & EPR insulation / Ø11.2 - Ø14.4mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 70x70mm, penetration seals min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Single HD604.5, 5x1.5mm ² core with EVA sheath & XLPE insulation / Ø13mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 70x70mm, penetration seals min 25mm from edges, min 30mm separation | FAS180387A.1 |
| Cables, single or bundled up to Ø21mm, with/without trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, protruding, boards separated by min 90mm, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/120 | max seal size 600x600mm | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, protruding, boards separated by min 90mm, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/60 | max seal size 600x600mm | FAS180387A.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, protruding, boards separated by min 90mm, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 600x600mm | FAS180387A.1 |
| Steel cable trays/ladders | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, protruding, boards separated by min 90mm, perimeter edges sealed with iPASSIVE FR Acrylic | -240/180 | max seal size 600x600mm | FAS180387A.1 |
| Non-sheathed wires up to Ø17mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, protruding, boards separated by min 90mm, perimeter edges sealed with iPASSIVE FR Acrylic | -240/180 | max seal size 600x600mm | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Non-sheathed wires up to Ø24mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, protruding, boards separated by min 90mm, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 600x600mm | FAS180387A.1 |
| Cables, single or bundled up to Ø50mm, with/without trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, pattress, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/90 | max seal size 600x600mm, pattress fixed with 100mm steel screws & penny washers / 350mm centres, min 50mm overlap on opening | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, pattress, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/60 | max seal size 600x600mm, pattress fixed with 100mm steel screws & penny washers / 350mm centres, min 50mm overlap on opening | FAS180387A.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, pattress, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/240 | max seal size 600x600mm, pattress fixed with 100mm steel screws & penny washers / 350mm centres, min 50mm overlap on opening | FAS180387A.1 |
| Steel cable trays/ladders | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, pattress, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/180 | max seal size 600x600mm, pattress fixed with 100mm steel screws & penny washers / 350mm centres, min 50mm overlap on opening | FAS180387A.1 |
| Non-sheathed wires up to Ø24mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, pattress, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/120 | max seal size 600x600mm, pattress fixed with 100mm steel screws & penny washers / 350mm centres, min 50mm overlap on opening | FAS180387A.1 |
| Cables, single or bundled up to Ø21mm, with trays | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/120 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/60 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/120 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Steel cable trays/ladders | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/60 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Non-sheathed wires up to Ø24mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/180/30 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Cables, single up to Ø21mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/30 | max seal size 2400 x 1200mm | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|--|----------|---|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables, single up to Ø21mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/240/30 | max seal size 600 x 1200mm | FAS180387A.1 |
| Cables, single or bundled up to Ø21mm, with trays | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/30 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/90/30 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Steel cable trays/ ladders | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Non-sheathed wires up to Ø17mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 2400 x 1200mm | FAS180387A.1 |
| Non-sheathed wires up to Ø24mm | Floor | Concrete, Aertated Concrete from 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Board 60mm 2-sided to either side, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/- | max seal size 2400 x 1200mm | FAS180387A.1 |
| Cables, single or bundled up to Ø21mm, with trays | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 600x1200mm wide, min 30mm seal separation | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 600x1200mm wide, min 30mm seal separation | FAS180387A.1 |
| Cables including telecoms up to Ø21mm in bundles up to Ø100mm | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 600x1200mm wide, min 30mm seal separation | FAS180387A.1 |
| Steel cable trays/ ladders | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/30 | max seal size 600x1200mm wide, min 30mm seal separation | FAS180387A.1 |
| Non-sheathed wires up to Ø24mm | Wall | Plasterboard from 75mm, single layer 12.5mm board | iPASSIVE FR Board 30mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/30/- | max seal size 600x1200mm wide, min 30mm seal separation | FAS180387A.1 |
| Cables, single or bundled up to Ø21mm, with trays | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/120/60 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 1200 x 2400mm wide | FAS180387A.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|----------|--|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| Steel cable trays/ladders | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| Non-sheathed wires up to Ø24mm | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 1-sided to both sides, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/30 | max seal size 1200 x 2400mm wide | FAS180387A.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 2-sided to either side, framed aperture, Cables& trays coated 150mm each side, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 600x1200mm wide, min 30mm seal separation, cables & trays coated 150mm each side with 300µm WFT iPASSIVE FR Service Coat | FAS180387A.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 2-sided to either side, framed aperture, Cables& trays coated 150mm each side, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 600x1200mm wide, min 30mm seal separation, cables & trays coated 150mm each side with 300µm WFT iPASSIVE FR Service Coat | FAS180387A.1 |
| Perforated steel cable trays/ladders | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 2-sided to either side, framed aperture, Cables& trays coated 150mm each side, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/60 | max seal size 600x1200mm wide, min 30mm seal separation, cables & trays coated 150mm each side with 300µm WFT iPASSIVE FR Service Coat | FAS180387A.1 |
| Unperforated steel cable trays/ladders | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 2-sided to either side, framed aperture, Cables& trays coated 150mm each side, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/30 | max seal size 600x1200mm wide, min 30mm seal separation, cables & trays coated 150mm each side with 300µm WFT iPASSIVE FR Service Coat | FAS180387A.1 |
| Non-sheathed wires up to Ø24mm | Wall | Plasterboard from 100mm, 2 layers 12.5mm board | iPASSIVE FR Board 50mm 2-sided to either side, framed aperture, Cables& trays coated 150mm each side, perimeter edges sealed with iPASSIVE FR Acrylic | -/60/30 | max seal size 600x1200mm wide, min 30mm seal separation, cables & trays coated 150mm each side with 300µm WFT iPASSIVE FR Service Coat | FAS180387A.1 |
| Cables, single up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single up to Ø21mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/240/60 | max seal size 80 x 80mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single or bundled up to Ø21mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single or bundled up to Ø50mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/45 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/45 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|---|--|-----------|--|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables, telecomms up to Ø21mm(Single or bundled up to Ø100mm) | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/90 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Steel cable trays/ladders | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Non-sheathed wires up to Ø17mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/45 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Non-sheathed wires up to Ø24mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to either side, 50mm stone wool 150kg /m3 backing | -/180/30 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single or bundled up to Ø21mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/240/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/240/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/120/120 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Steel cable trays/ladders | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/120/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Non-sheathed wires up to Ø24mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 100mm to either side | -/120/60 | max seal size 1200 x 2400mm wide, min 25mm seal separation | FAS180387D.1 |
| Cables, single or bundled up to Ø80mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to both sides, 50mm stone wool 150kg/m3 backing | -/240/60 | max seal size 1200 x 2400mm wide, min 30mm seal separation | FAS180387D.1 |
| Cables, telecomms up to Ø21mm(Single or bundled up to Ø100mm) | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to both sides, 50mm stone wool 150kg/m3 backing | -/60/60 | max seal size 1200 x 2400mm wide, min 30mm seal separation | FAS180387D.1 |
| Steel cable trays/ladders up to 500mm wide | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to both sides, 50mm stone wool 150kg/m3 backing | -/240/60 | max seal size 1200 x 2400mm wide, min 30mm seal separation | FAS180387D.1 |
| Non-sheathed wires up to Ø24mm | Wall | Concrete, Aerated concrete, Masonry, from 150mm, wall thickness may be reduced to 75mm for derated FRL | iPASSIVE EX Mortar 50mm to both sides, 50mm stone wool 150kg/m3 backing | -/240/120 | max seal size 1200 x 2400mm wide, min 30mm seal separation | FAS180387D.1 |
| Cables, single up to Ø21mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/90 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---|--|-----------|--|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables, single or bundled up to Ø21mm, with trays | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables, single or bundled up to Ø80mm, with trays | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/45 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables, single up to Ø21mm in bundles up to Ø100mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/180 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Steel cable trays/ladders | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/90/60 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Non-sheathed wires up to Ø17mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/60 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Non-sheathed wires up to Ø24mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 50mm flush to top side, 50mm stone wool 150kg /m3 backing | -/180/30 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables, single or bundled up to Ø50mm, with trays | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/180/60 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables, single or bundled up to Ø80mm, with trays | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/120/60 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables up to Ø21mm(Single or bundled up to Ø100mm) | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/180/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Steel cable trays/ladders | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/120/60 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Non-sheathed wires up to Ø17mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/180/90 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Non-sheathed wires up to Ø24mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 100mm flush to top side | -/180/- | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables, single or bundled up to Ø21mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 150mm | -/240/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables up to Ø21mm(Single or bundled up to Ø100mm) | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 150mm | -/120/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|---|-------------|--|---|-----------|--|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Steel cable trays/ladders up to 500mm wide | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 150mm | -/240/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables Ø22-Ø50mm, single or bundled | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 150mm | -/240/90 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables Ø51-Ø80mm, single or bundled | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 150mm | -/90/60 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Non-sheathed wires up to Ø24mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 60mm for derated FRL | iPASSIVE EX Mortar 150mm | -/120/120 | max seal size 1200 x 2400mm, min 30mm separation | FAS180387D.1 |
| Cables, single up to Ø21mm | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/90 | max seal size 1200 x 2400mm wide, min 100mm separation | FAS180387D.1 |
| Cables, single or bundled up to Ø80mm, with trays | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/60 | max seal size 1200 x 2400mm wide, min 25mm separation | FAS180387D.1 |
| Steel cable trays/ladders | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/60 | max seal size 1200 x 2400mm wide, min 25mm separation | FAS180387D.1 |
| Non-sheathed wires up to Ø24mm | Wall | Plasterboard from 100mm | iPASSIVE EX Mortar 25mm both sides, 50mm stone wool 150kg /m3 backing | -/120/45 | max seal size 1200 x 2400mm wide, min 25mm separation | FAS180387D.1 |
| Cables up to Ø21mm(Single or bundled up to Ø50mm) | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables up to Ø80mm(Single or bundled up to Ø50mm) | Wall | Flexible or Rigid walls ≥100mm | iPASSIVE FR Putty Cord 15mm to both sides | -/60/60 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables up to Ø21mm(Single or bundled up to Ø50mm) | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/120/60 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables, single up to Ø21mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/120/120 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables Ø22-Ø50mm, single or bundled | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/120/90 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables Ø51-Ø80mm, single or bundled | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to top side | -/120/60 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables up to Ø21mm(Single or bundled up to Ø75mm) | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to bottom side | -/60/45 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables, single up to Ø21mm | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to bottom side | -/120/60 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|--|---|-----------|--|--------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| Cables Ø22-Ø80mm, single or bundled | Floor | Concrete, Aerated concrete, Masonry, from 150mm, floor thickness may be reduced to 100mm for derated FRL | iPASSIVE FR Putty Cord 15mm to bottom side | -/90/45 | max annular 10mm, min 30mm seal separation | FAS180387E.1 |
| Cables up to Ø14mm, UK standard double flushbox | Wall | Flexible walls ≥100mm | iPASSIVE FR Putty Pad 4mm fully lining interior of box, up to 130mm wide x 70mm high x 47mm deep, up to 22mm hole for cables | -/60/60 | aperture 135mm wide x 75mm high, min 30mm between cable penetrations | FAS180387E.1 |
| Cables up to Ø14mm, UK standard double flushbox | Wall | Flexible walls ≥120mm | iPASSIVE FR Putty Pad 4mm fully lining interior of box, up to 130mm wide x 70mm high x 47mm deep, boxes fitted back to back, 1 to each face, up to 22mm hole for cables | -/90/90 | aperture 135mm wide x 77mm high, min 30mm between cable penetrations | FAS180387E.1 |
| Cables, 2.5mm twin & earth | Wall | Flexible walls ≥120mm | iPASSIVE FR Putty Pad 4mm fully lining interior of box, up to 130mm wide x 70mm high x 47mm deep, boxes fitted back to back, 1 to each face, up to 22mm hole for cables | -/90/90 | aperture 135mm wide x 77mm high | FAS180387E.1 |
| Cables up to Ø14mm, Schneider Electric IMT 36026 box | Wall | Flexible walls ≥100mm | iPASSIVE FR Putty Pad 4mm fully lining back of box, up to 72mm wide x 90mm high x 50mm deep, boxes fitted side by side, 1 to each face | -/60/45 | aperture 73mm wide x 91mm high x 51mm deep | FAS180387E.1 |
| Cables up to Ø14mm, ELKO 4189 1223720 box | Wall | Flexible walls ≥100mm | iPASSIVE FR Putty Pad 4mm fully lining interior of box, up to 72mm wide x 90mm high x 58mm deep, boxes fitted adjacent, 1 to each face | -/90/90 | aperture 92mm wide x 112mm high | FAS180387E.1 |
| Cables up to Ø14mm, ELKO 5421 1223470 box | Wall | Flexible walls ≥100mm | iPASSIVE FR Putty Pad 4mm fully lining interior of box, up to 73mm wide x 73mm high x 55mm deep, boxes fitted side by side, 1 to each face | -/90/90 | aperture 74mm wide x 74mm high | FAS180387E.1 |
| SEISMIC/CONSTRUCTION JOINTS | | | | | | |
| Linear joint seals | Vertical | Plasterboard/concrete, min wall thickness 75mm with 1 layer 13mm board both sides | iPASSIVE FR Acrylic 12.5mm deep to both sides backed with 50mm steel partition head track/stud | -/60/45 | min seal depth 12.5mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Plasterboard/concrete, min wall thickness 75mm with 1 layer 13mm board both sides | iPASSIVE FR Acrylic 12.5mm deep to both sides backed with 50mm steel partition head track/stud | -/60/45 | min seal depth 12.5mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Vertical | Plasterboard/concrete, min wall thickness 100mm with 2 layers 13mm board both sides | iPASSIVE FR Acrylic 12.5mm deep to both sides backed with 50mm steel partition head track/stud and 12.5mm deep stone wool 35kg/m3 | -/120/120 | min seal depth 12.5mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Plasterboard/concrete, min wall thickness 100mm with 2 layers 13mm board both sides | iPASSIVE FR Acrylic 12.5mm deep to both sides backed with 50mm steel partition head track/stud and 12.5mm deep stone wool 35kg/m3 | -/120/120 | min seal depth 12.5mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Vertical | Plasterboard/concrete, min wall thickness 100mm with 2 layers 13mm board both sides | iPASSIVE FR Acrylic 25mm deep to both sides backed with 50mm steel partition head track/stud | -/120/120 | min seal depth 25mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Plasterboard/concrete, min wall thickness 100mm with 2 layers 13mm board both sides | iPASSIVE FR Acrylic 25mm deep to both sides backed with 50mm steel partition head track/stud | -/120/120 | min seal depth 25mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Vertical | Masonry/concrete, min wall thickness 150mm | iPASSIVE FR Acrylic 25mm deep to either side backed with 20mm deep stone wool 40kg/m3 | -/240/60 | min seal depth 25mm, max seal width 30mm | FAS180387C.1 |

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| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|------------------------------------|-------------|--|--|-----------------------------|--|--------------|
| SEISMIC/CONSTRUCTION JOINTS | | | | | | |
| Linear joint seals | Horizontal | Masonry/concrete, min wall thickness 150mm | iPASSIVE FR Acrylic 25mm deep to either side backed with 20mm deep stone wool 40kg/m ³ | -/240/60 | min seal depth 25mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Vertical | Masonry/concrete, min wall thickness 150mm | iPASSIVE FR Acrylic 15mm deep to both sides backed with 20mm deep stone wool 40kg/m ³ | -/240/240 | min seal depth 15mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min wall thickness 150mm | iPASSIVE FR Acrylic 15mm deep to both sides backed with 20mm deep stone wool 40kg/m ³ | -/240/240 | min seal depth 15mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Vertical | Masonry/concrete, min wall thickness 150mm | iPASSIVE FR Acrylic 25mm deep to either side backed with 48mm deep AES mineral fibre | -/240/120 | min seal depth 25mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min wall thickness 150mm | iPASSIVE FR Acrylic 25mm deep to either side backed with 48mm deep AES mineral fibre | -/240/120 | min seal depth 25mm, max seal width 30mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min floor thickness 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep to any position backed with 25mm deep AES mineral fibre | -/120/60 | min seal depth 25mm, max seal width 100mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min floor thickness 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 25mm deep to top face backed with 25mm deep AES mineral fibre | -/180/180 | min seal depth 25mm, max seal width 100mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min floor thickness 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep to both sides backed with 25mm deep stone wool 40kg/m ³ | -/120/120 | min seal depth 15mm, max seal width 100mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min floor thickness 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep to both sides backed with 25mm deep stone wool 140kg/m ³ | -/180/180 | min seal depth 15mm, max seal width 100mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min floor thickness 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 15mm deep to both sides backed with 25mm deep stone wool 35kg/m ³ | -/240/240 | min seal depth 15mm, max seal width 100mm | FAS180387C.1 |
| Linear joint seals | Horizontal | Masonry/concrete, min floor thickness 150mm, floor thickness may be reduced to min 60mm for derated FRL | iPASSIVE FR Acrylic 10mm deep to both sides backed with 90mm deep stone wool 33kg/m ³ | -/240/240 | min seal depth 10mm, max seal width 100mm | FAS180387C.1 |
| Linear joint seals | Vertical | Plasterboard | iPASSIVE FR Board 60mm 2-sided, cut to shape & friction fitted to either side backed by steel partition head track/stud, perimeter edges sealed with iPASSIVE FR Acrylic | applicable FRR to substrate | max seal size 1200mm x unlimited width | FAS180387A.1 |
| Linear joint seals | Vertical | Masonry/concrete | iPASSIVE FR Board 60mm 2-sided, cut to shape & friction fitted to either side backed by steel partition head track/stud, perimeter edges sealed with iPASSIVE FR Acrylic | applicable FRR to substrate | max seal size 1200mm x unlimited width | FAS180387A.1 |
| Control/linear joint seals | Horizontal | Plasterboard, min wall thickness 100mm, single or double layer board as long as overall board thickness is equal to seal depth | iPASSIVE FR IPT 12.5mm deep to both sides backed with stone wool & partition head track | -/120/120 | min seal depth 12.5mm, max seal width 30mm, 12.5mm deep stone wool backing 35kg/m ³ | 4788656094-B |
| Control/linear joint seals | Vertical | Plasterboard, min wall thickness 100mm, single or double layer board as long as overall board thickness is equal to seal depth | iPASSIVE FR IPT 12.5mm deep to both sides backed with stone wool & steel/timber studs | -/120/120 | min seal depth 12.5mm, max seal width 30mm, 12.5mm deep stone wool backing 35kg/m ³ | 4788656094-B |
| Control/linear joint seals | Horizontal | Concrete/Masonry, min wall thickness 100mm | iPASSIVE FR IPT 12.5mm deep to both sides backed with stone wool & partition head track | -/120/120 | min seal depth 12.5mm, max seal width 30mm, 12.5mm deep stone wool backing 35kg/m ³ | 4788656094-B |
| Control/linear joint seals | Vertical | Concrete/Masonry, min wall thickness 100mm | iPASSIVE FR IPT 12.5mm deep to both sides backed with stone wool | -/120/120 | min seal depth 12.5mm, max seal width 30mm, 12.5mm deep stone wool backing 35kg/m ³ | 4788656094-B |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|------------------------------------|-------------------------|--|---|-----------|--|--------------|
| SEISMIC/CONSTRUCTION JOINTS | | | | | | |
| Control/linear joint seals | Horizontal | Concrete/masonry, min wall thickness 64mm, | iPASSIVE FR IPT 12.5mm deep to both sides backed with stone wool & partition head track | -/60/60 | min seal depth 12.5mm, max seal width 30mm, 12.5mm deep stone wool backing 35kg/m3 | 4788656094-B |
| Control/linear joint seals | Vertical | Concrete/masonry, min wall thickness 64mm, | iPASSIVE FR IPT 12.5mm deep to both sides backed with stone wool & partition head track | -/60/60 | min seal depth 12.5mm, max seal width 30mm, 12.5mm deep stone wool backing 35kg/m3 | 4788656094-B |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 150mm | iPASSIVE FR IPT 15mm deep to both sides backed with stone wool 33kg/m3 | -/240/240 | min seal depth 15mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-B |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 100mm | iPASSIVE FR IPT 15mm deep to both sides backed with stone wool 33kg/m3 | -/120/120 | min seal depth 15mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-B |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 64mm | iPASSIVE FR IPT 15mm deep to both sides backed with stone wool 33kg/m3 | -/90/90 | min seal depth 15mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-B |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 150mm | iPASSIVE FR IPT 25mm deep anywhere within floor backed with AES mineral fibre 128kg/m3 | -/240/180 | min seal depth 25mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-B |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 100mm | iPASSIVE FR IPT 25mm deep anywhere within floor backed with AES mineral fibre 128kg/m3 | -/120/120 | min seal depth 25mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-B |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 64mm | iPASSIVE FR IPT 25mm deep anywhere within floor backed with AES mineral fibre 128kg/m3 | -/90/90 | min seal depth 25mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-B |
| Control/linear joint seals | Horizontal/ Vertical | Plasterboard, min wall thickness 100mm | iPASSIVE FR ASF 9mm deep to both sides backed with 20mm deep stone wool 35kg/m3 | -/90/90 | min seal depth 9mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Concrete/Masonry, min wall thickness 100mm | iPASSIVE FR ASF 9mm deep to both sides backed with 20mm deep stone wool 35kg/m3 | -/90/90 | min seal depth 9mm, max seal width 30mm, 20mm deep stone wool backing 33kg/m3 | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Plasterboard, min wall thickness 100mm | iPASSIVE FR ASF 20mm deep to both sides backed with PEF rod | -/120/120 | min seal depth 20mm, max seal width 30mm, PEF rod backing | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Concrete/Masonry, min wall thickness 100mm | iPASSIVE FR ASF 20mm deep to both sides backed with PEF rod | -/120/120 | min seal depth 20mm, max seal width 30mm, PEF rod backing | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Plasterboard, min wall thickness 130mm | iPASSIVE FR ASF 15mm deep to both sides backed with 15mm deep stone wool | -/120/120 | min seal depth 15mm, max seal width 30mm, 15mm deep stone wool backing | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Plasterboard, min wall thickness 130mm | iPASSIVE FR ASF 30mm deep to both sides backed with any backing material | -/120/120 | min seal depth 30mm, max seal width 30mm, any backing material | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Plasterboard, min wall thickness 130mm | iPASSIVE FR ASF 15mm deep to both sides backed with any backing material | -/120/90 | min seal depth 15mm, max seal width 30mm, any backing material | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Concrete/Masonry, min wall thickness 130mm | iPASSIVE FR ASF 15mm deep to both sides backed with 15mm deep stone wool | -/120/120 | min seal depth 15mm, max seal width 30mm, 15mm deep stone wool backing | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Concrete/Masonry, min wall thickness 130mm | iPASSIVE FR ASF 30mm deep to both sides backed with any backing material | -/120/120 | min seal depth 30mm, max seal width 30mm, any backing material | 4788656094-A |
| Control/linear joint seals | Horizontal/ Vertical | Concrete/Masonry, min wall thickness 130mm | iPASSIVE FR ASF 15mm deep to both sides backed with any backing material | -/120/90 | min seal depth 15mm, max seal width 30mm, any backing material | 4788656094-A |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 150mm | iPASSIVE FR ASF 25mm deep to top side backed with 25mm deep stone wool 35kg/m3 | -/120/120 | min seal depth 25mm, max seal width 100mm, 25mm deep stone wool 35kg/m3 backing | 4788656094-A |
| Control/linear joint seals | Horizontal | Concrete, min floor thickness 64mm | iPASSIVE FR ASF 25mm deep to top side backed with 25mm deep stone wool 35kg/m3 | -/90/90 | min seal depth 25mm, max seal width 100mm, 25mm deep stone wool 35kg/m3 backing | 4788656094-A |

*Not tested to AS 1530.4-2005 or assessed to AS 4072.1 – 2005 for use with Waste Water, Drainage or Vent pipes

RYANFIRE PRODUCTS LTD

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The products listed in this register have all been tested to AS1530.4-2005 or Assessed to AS 4072.1-2005 as referenced within the New Zealand Building Code.

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|--|----------|----------------|------------|---------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | | |
| COPPER/STEEL PIPES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP / INTUMASTIC / ROCKWOOL SLEEVE | /120/120 | 200MM DIA PIPE | 23671.04 | 62 |
| COPPER/STEEL PIPES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP / INTUMASTIC / ROCKWOOL SLEEVE | /120/120 | 200MM DIA PIPE | 23671.04 | 59 |
| COPPER/STEEL PIPES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 150MM DIA PIPE | 23671.04 | 57 |
| BRASS PIPES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 100MM DIA PIPE | 23671.04 | 58 |
| STEEL PIPES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 40MM DIA PIPE | 23671.04 | 22 |
| STEEL PIPES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /90/90 | 300MM DIA PIPE | 23671.04 | 21A |
| STEEL PIPES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 300MM DIA PIPE | 23671.04 | 21B |
| COPPER PIPES | WALL | 110MM THICK WALL - GIB / MASONRY / HEBEL / SPEEDWALL / CLT | INTUBATT (SINGLE LAYER CLOSED CAVITY) / INTUMASTIC | /120/0 | 50MM DIA PIPE | 34088500.9 | TABLE 4 |
| COPPER PIPES | WALL | 110MM THICK WALL - GIB / MASONRY / HEBEL / SPEEDWALL / CLT | INTUBATT (SINGLE LAYER CLOSED CAVITY) / INTUMASTIC | /120/60 | 34MM DIA PIPE | 34088500.9 | TABLE 4 |
| COPPER PIPES | WALL | 116MM THICK FR PLASTERBOARD/MASONRY/CONCRETE | INTUMASTIC HP | /120/0 | 80MM DIA PIPE | 51892000.2 | C |
| STEEL PIPES | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC | /60/30 | 87MM DIA PIPE | 35084000.2 | 1 |
| STEEL PIPES | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC | /60/30 | 87MM DIA PIPE | 35084000.2 | 2 |
| COPPER/STEEL PIPES | WALL | 110MM THICK WALL - GIB / MASONRY / HEBEL / 78MM THICK SPEEDWALL / CLT | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC | /240/0 | 150MM DIA PIPE | 34088500.9 | V27 |
| BRASS PIPES | WALL | 110MM THICK WALL - GIB / MASONRY / HEBEL / 78MM THICK SPEEDWALL / CLT | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC | /240/0 | 100MM DIA PIPE | 34088500.9 | V26 |
| COPPER PIPES | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/60 | 67MM DIA PIPE | 52208000.1 | 13 |
| COPPER/STEEL PIPES | WALL | 110MM THICK WALL - GIB / MASONRY / HEBEL / 78MM THICK SPEEDWALL / CLT | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC / PENOWRAP | /240/120 | 150MM DIA PIPE | 34088500.9 | V27 |
| BRASS PIPES | WALL | 110MM THICK WALL - GIB / MASONRY / HEBEL / 78MM THICK SPEEDWALL / CLT | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC / PENOWRAP | /240/120 | 100MM DIA PIPE | 34088500.9 | V26 |
| STEEL PIPES | WALL | 130MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC | /120/60 | 220MM DIA PIPE | 35084000.2 | 5 |
| STEEL PIPES | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / PENOWRAP | /60/60 | 50MM DIA PIPE | FCO-3228 | SP17 |
| STEEL PIPES | WALL | 130MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC | /120/90 | 60MM DIA PIPE | 35084000.2 | 6 |
| COPPER PIPES | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUSIL | /120/0 | 15MM DIA PIPE | 35256800 | 2 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|---|----------|----------------|-------------|--------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | | |
| COPPER PIPES | WALL | 128MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC / ROCKWOOL SLEEVE | /120/120 | 152MM DIA PIPE | 35084000.2 | 7 |
| COPPER/STEEL PIPES | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC / ROCKWOOL SLEEVE | /120/120 | 200MM DIA PIPE | 340885000.9 | V29 |
| STEEL PIPES | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC / PENOWRAP | /90/90 | 300MM DIA PIPE | 340885000.9 | V66 |
| STEEL PIPES | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT (ONE LAYER EITHER SIDE OF WALL) / INTUMASTIC / PENOWRAP | /120/120 | 300MM DIA PIPE | 340885000.9 | V67 |
| STEEL PIPES | WALL | 150MM THICK MASONRY WALLS | INTUCOMPOUND / ROCKWOOL SLEEVE | /240/180 | 170MM DIA PIPE | 35084000.2 | 97 |
| COPPER PIPES | WALL | 150MM THICK MASONRY WALLS | INTUCOMPOUND / ROCKWOOL SLEEVE | /240/60 | 108MM DIA PIPE | 35084000.2 | 98 |
| STEEL PIPES | CEILING | 26MM THICK FR GIB | INTUMASTIC | /60/0 | 60MM DIA PIPE | 35256800 | 3 |
| COPPER PIPES | CEILING | 26MM THICK FR GIB | INTUMASTIC | /60/0 | 42MM DIA PIPE | 35256800 | 4 |
| STEEL PIPES | CEILING | 26MM THICK FR GIB | INTUBATT / INTUMASTIC | /60/0 | 50MM DIA PIPE | 35256800 | 5 |
| COPPER PIPES | FLOOR | 100MM THICK STAHLTON TIMBER INFILL FLOOR | INTUBATT | /120/0 | 100MM DIA PIPE | 51882400.2 | D |
| STEEL PIPES | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / INTUMASTIC | /120/30 | 150MM DIA PIPE | 46812800.1 | 6 |
| COPPER PIPES | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / INTUMASTIC | /120/0 | 100MM DIA PIPE | 46813300.1 | 6 |
| COPPER / STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP / INTUMASTIC / ROCKWOOL SLEEVE | /120/120 | 200MM DIA PIPE | 23671.04 | 62 |
| COPPER / STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 150MM DIA PIPE | 23671.04 | 57 |
| BRASS PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 100MM DIA PIPE | 23671.04 | 58 |
| COPPER / STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 150MM DIA PIPE | 23671.04 | 60 |
| BRASS PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP / PENOWRAP | /120/120 | 100MM DIA PIPE | 23671.04 | 61 |
| STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC / PENOWRAP | /120/120 | 40MM DIA PIPE | 23671.04 | 39 |
| STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC / PENOWRAP | /90/90 | 300MM DIA PIPE | 23671.04 | 32A |
| STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC / PENOWRAP | /90/90 | 300MM DIA PIPE | 23671.04 | 32A |
| STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC / PENOWRAP | /120/120 | 300MM DIA PIPE | 23671.04 | 32B |
| STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC / PENOWRAP | /120/120 | 300MM DIA PIPE | 23671.04 | 32B |
| COPPER / STEEL PIPES | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP / INTUMASTIC / ROCKWOOL SLEEVE | /120/120 | 200MM DIA PIPE | 23671.04 | 59 |
| BRASS PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT | /180/0 | 100MM DIA PIPE | 340885000.9 | H15 |
| BRASS PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / PENOWRAP | /180/120 | 100MM DIA PIPE | 340885000.9 | H15 |
| COPPER / STEEL PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT | /180/0 | 210MM DIA PIPE | 340885000.9 | H16 |
| COPPER / STEEL PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / PENOWRAP | /180/120 | 210MM DIA PIPE | 340885000.9 | H16 |
| COPPER / STEEL PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / ROCKWOOL SLEEVE | /120/120 | 200MM DIA PIPE | 340885000.9 | H17 |
| COPPER PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INSULATION SLEEVE | /120/60 | 25MM DIA PIPE | 340885000.9 | H31 |
| STEEL PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / PENOWRAP | /90/90 | 300MM DIA PIPE | 340885000.9 | H47 |
| STEEL PIPES | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / PENOWRAP | /120/120 | 300MM DIA PIPE | 340885000.9 | H48 |
| COPPER PIPES | FLOOR | 120MM THICK CONCRETE | INTUBATT / INSULATION SLEEVE | /90/60 | 150MM DIA PIPE | 35319300 | 3 |
| COPPER PIPES | FLOOR | 120MM THICK CONCRETE | INTUBATT / ARMAFLEX SLEEVE | /120/120 | 25MM DIA PIPE | 2600703 | 5 |
| COPPER PIPES | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUMASTIC | /180/0 | 160MM DIA PIPE | 2600703.2A | A |
| BRASS PIPES | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUMASTIC | /180/0 | 100MM DIA PIPE | 2600703.2A | B |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|-----------------------------------|----------|--------------------|-------------|--------|
| NON-INSULATED NON-COMBUSTIBLE PIPES | | | | | | | |
| COPPER PIPES | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / ROCKWOOL SLEEVE | /240/240 | 15MM DIA PIPE | 35084000.2 | 105 |
| STEEL PIPES | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / ROCKWOOL SLEEVE | /240/90 | 170MM DIA PIPE | 35084000.2 | 101 |
| COPPER PIPES | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / ROCKWOOL SLEEVE | /240/30 | 108MM DIA PIPE | 35084000.2 | 102 |
| STEEL PIPES | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / ROCKWOOL SLEEVE | /240/240 | 40MM DIA PIPE | 35084000.2 | 103 |
| STEEL PIPES | FLOOR | 150MM THICK CONCRETE | INTUMASTIC / ROCKWOOL SLEEVE | /120/90 | 49MM DIA PIPE | 35084000.2 | 3 |
| STEEL PIPES | FLOOR | 150MM THICK CONCRETE | INTUBATT (SINGLE LAYER) | /30/0 | 220MM DIA PIPE | 35319300 | 1 |
| STEEL PIPES | FLOOR | 150MM THICK CONCRETE | INTUBATT | /120/30 | 160MM DIA PIPE | 35319300 | 2 |
| STEEL PIPES | FLOOR | 150MM THICK CONCRETE | INTUBATT | /120/0 | 220MM DIA PIPE | 35084000.2 | 4 |
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | | |
| COBRAFLX PIPE / 25MM THICK ARMAFLEX | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / RF COLLAR | /120/120 | 16 X 8MM DIA PIPES | 340885000.9 | V45 |
| COPPER PIPE / 40MM THICK ROCKWOOL | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 22MM DIA PIPE | 340885000.9 | V30 |
| COPPER PIPE / 50MM THICK ROCKWOOL | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP / INTUMASTIC | /180/120 | 32MM DIA PIPE | 340885000.9 | V28 |
| COPPER PIPE / 50MM THICK FIBREGLASS | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP / INTUMASTIC | /180/120 | 32MM DIA PIPE | 340885000.9 | V28 |
| COPPER / STEEL PIPE / 38MM THICK ARMAFLEX | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP / INTUMASTIC | /180/120 | 32MM DIA PIPE | 340885000.9 | V28 |
| COPPER / STEEL PIPE / 38MM THICK ARMAFLEX | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP / INTUMASTIC | /180/90 | 32MM DIA PIPE | 340885000.9 | V28 |
| COPPER / STEEL PIPE / 50MM THICK PIR | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP / INTUMASTIC | /120/120 | 32MM DIA PIPE | 340885000.9 | V28 |
| COPPER PIPES / 25MM THICK THERMOTEC | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC HP | /120/60 | 25MM DIA PIPE | 340885000.9 | V50 |
| COPPER PIPES / 40MM THICK THERMOBREAK | WALL | 116MM THICK FR PLASTERBOARD / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /120/30 | 80MM DIA PIPE | 51892000.2 | G |
| COPPER PIPES / 9MM THICK ARMAFLEX | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 15MM DIA PIPE | FCO-3228 | SP8 |
| COPPER PIPES / 9MM THICK ARMAFLEX | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 19MM DIA PIPE | FCO-3228 | SP22 |
| COPPER PIPES / 9MM THICK ARMAFLEX | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 19MM DIA PIPE | FCO-3228 | SP21 |
| COPPER PIPES / 30MM THICK FIBREGLASS | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/90 | 160MM DIA PIPE | 52208000.1 | 11 |
| COPPER PIPES / 33MM THICK ARMAFLEX | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/30 | 160MM DIA PIPE | 52208000.1 | 12 |
| COPPER PIPES / 33MM THICK ARMAFLEX | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/120 | 67MM DIA PIPE | 52208000.1 | 13 |
| COPPER PIPES / 13MM THICK ARMAFLEX | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/120 | 15MM DIA PIPE | 52208000.1 | 14 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|---|-------------|---|-------------------------------------|----------|----------------------|-------------|--------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | | |
| COPPER PIPES / 33MM THICK ARMAFLEX | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/120 | 15MM DIA PIPE | 52208000.1 | 15 |
| COPPER PIPES / 33MM THICK ARMAFLEX | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/120 | 40MM DIA PIPE | 52208000.1 | 16 |
| STEEL PIPES / 38MM THICK ARMAFLEX | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP / INTUMASTIC | /120/60 | 220MM DIA PIPE | 35256800 | 6 |
| STEEL PIPES / 50MM THICK FIBREGLASS | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP / INTUMASTIC | /120/90 | 220MM DIA PIPE | 35256800 | 7 |
| COPPER PIPES / 32MM THICK ARMAFLEX | WALL | 130MM THICK GIB / MASONRY / CONCRETE | INTUSLEEVE / INTUMASTIC | /120/120 | 15MM DIA PIPE | 35084000.2 | 8 |
| COPPER PIPES / 50MM THICK FIBREGLASS | WALL | 130MM THICK GIB / MASONRY / CONCRETE | INTUSLEEVE / INTUMASTIC | /120/120 | 15MM DIA PIPE | 35084000.2 | 9 |
| COPPER PIPES / 38MM THICK ARMAFLEX | WALL | 128MM THICK GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /120/90 | 25MM DIA PIPE | 35084000.2 | 10 |
| COPPER PIPES / 50MM THICK FIBREGLASS | WALL | 128MM THICK GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /120/90 | 25MM DIA PIPE | 35084000.2 | 11 |
| COPPER PIPES / 30MM THICK PIR | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT / INTUMASTIC HP | /120/120 | 22MM DIA PIPE | 35319300 | 4 |
| COPPER PIPES / ARMAFLEX | WALL | GIB / MASONRY / HEBEL / SPEEDWALL / CLT | INTUBATT / RF COLLAR | /120/120 | 2 A/C PIPES | 34088500.9 | V18 |
| COPPER PIPES / 50MM THICK FIBREGLASS | WALL | 128MM THICK GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /180/90 | 25MM DIA PIPE | 35084000.2 | 11 |
| COPPER PIPES / 38MM THICK ARMAFLEX | WALL | 128MM THICK GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /180/90 | 25MM DIA PIPE | 35084000.2 | 10 |
| COPPER PIPES / 30MM THICK PIR | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC HP | /120/120 | 22MM DIA | 340885000.9 | V31 |
| COPPER PIPES / 25MM THICK ARMAFLEX | WALL | 100MM THICK MASONRY WALL | INTUMASTIC HP | /120/120 | 25MM DIA | 23671.4 | 25 |
| COPPER PIPES / 60MM THICK FIBREGLASS | WALL | 150MM THICK MASONRY WALL | INTUCOMPOUND | /240/60 | 108MM DIA PIPE | 35084000.2 | 98 |
| COPPER PIPES / 40MM THICK ROCKWOOL | WALL | 150MM THICK MASONRY WALL | INTUCOMPOUND | /240/180 | 15MM DIA PIPE | 35084000.2 | 99 |
| COPPER PIPES / 60MM THICK FIBREGLASS | WALL | 150MM THICK MASONRY WALL | INTUCOMPOUND | /240/240 | 15MM DIA PIPE | 35084000.2 | 103 |
| STEEL PIPE / 25MM THICK ARMAFLEX | CEILING | 26MM THICK FR GIB | INTUMASTIC HP | /60/30 | 34MM DIA PIPE | 35256800 | 8 |
| COPPER PIPE / 38MM THICK ARMAFLEX | FLOOR | 100MM THICK STALTON TIMBER INFILL FLOOR | INTUBATT / INTUSTRAP | /90/90 | 80MM DIA COPPER PIPE | 51892400.2 | B |
| COPPER PIPES / 25MM THICK ARMAFLEX | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 25MM DIA | 23671.4 | 36 |
| COPPER PIPES / 38MM THICK ARMAFLEX | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSTRAP | /120/120 | 25MM DIA PIPE | 35084000.2 | 14 |
| COPPER PIPES / 50MM THICK PIR INSULATION | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSTRAP | /120/90 | 25MM DIA PIPE | 2600703.2A | D |
| COPPER PIPES / 50MM THICK GLASSFIBRE INSULATION | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSTRAP | /180/90 | 25MM DIA PIPE | 2600703.2A | F |
| COPPER PIPES / 50MM THICK ROCKWOOL INSULATION | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSTRAP | /180/90 | 25MM DIA PIPE | 2600703.2A | G |
| COPPER / 40MM THICK ARMAFLEX | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / INTUSTRAP | /120/90 | 80MM DIA PIPE | 46812300.1 | 7 |
| COPPER / STEEL PIPES / 38MM THICK ARMAFLEX | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUSTRAP | /120/120 | 32MM DIA | 340885000.9 | H18 |
| STEEL PIPES / 38MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE | INTUCOLLAR | /120/60 | 89MM DIA PIPE | 35256800 | 9 |
| STEEL PIPES / 40MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE | INTUMASTIC HP | /90/60 | 89MM DIA PIPE | 35256800 | 10 |
| STEEL PIPES / 38MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE | INTUBATT (SINGLE LAYER) / INTUSTRAP | /30/30 | 220MM DIA PIPE | 35256800 | 11 |
| STEEL PIPES / 50MM THICK FIBREGLASS | FLOOR | 150MM THICK CONCRETE | INTUBATT (SINGLE LAYER) / INTUSTRAP | /90/30 | 220MM DIA PIPE | 35256800 | 12 |
| COPPER PIPES / 50MM THICK FIBREGLASS | FLOOR | 150MM THICK CONCRETE | INTUSTRAP / INTUMASTIC | /120/120 | 15MM DIA PIPE | 35084000.2 | 12 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|--|----------|--|-------------|-----------|
| INSULATED NON-COMBUSTIBLE PIPES | | | | | | | |
| COPPER PIPES / 35MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE | INTUSTRAP / INTUMASTIC | /120/120 | 15MM DIA PIPE | 35084000.2 | 13 |
| STEEL PIPES / 60MM THICK FIBREGLASS | FLOOR | 150MM THICK CONCRETE | INTUSTRAP | /60/30 | 160MM DIA PIPE | 35319300 | 5 |
| STEEL PIPES / 60MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE | INTUBATT / INTUSTRAP | /60/0 | 160MM DIA PIPE | 35319300 | 6 |
| STEEL PIPES / 40MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE | INTUBATT / INTUSTRAP | /240/30 | 220MM DIA PIPE | 35319300 | 7 |
| STEEL PIPES / 38MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSTRAP | /180/180 | 55MM DIA PIPE | 35084000.2 | 15 |
| STEEL PIPES / 50MM THICK FIBREGLASS | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSTRAP | /60/60 | 160MM DIA PIPE | 35084000.2 | 16 |
| COPPER PIPES / 60MM THICK FIBREGLASS | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSTRAP | /240/240 | 15MM DIA PIPE | 35084000.2 | 104 |
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | | |
| HDPE PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP | /240/120 | 40MM DIA PIPE | 340885000.9 | V39 |
| PVC PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP | /240/240 | 40MM DIA PIPE | 340885000.9 | V32 |
| PVC PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / RF COLLARS | /120/120 | 150MM DIA PIPE | 340885000.9 | V33 - V38 |
| HDPE PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / RF COLLARS | /120/120 | 110MM DIA PIPE | 340885000.9 | V40 - V44 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUSTRAP | /180/180 | 48MM DIA PIPE | 340885000.9 | V51 - V52 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC HP | /180/180 | 34MM DIA PIPE | 340885000.9 | V53 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC HP | /120/120 | 48MM DIA PIPE | 340885000.9 | V54 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | WALL | 116MM THICK GIB / 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 34MM DIA PIPE | 23671.04 | 23 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | WALL | 116MM THICK GIB / 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP | /120/120 | 34MM DIA PIPE | 23671.04 | 23 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | WALL | 116MM THICK GIB / 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 48MM DIA PIPE | 23671.04 | 24 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | WALL | 116MM THICK GIB / 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP | /120/120 | 48MM DIA PIPE | 23671.04 | 24 |
| PVC PIPE / COUPLING / KNUCKLE JOINT | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | SL COLLAR | /90/60 | 110MM DIA PIPE | 46469500.2 | H |
| PVC PIPE / COUPLING / KNUCKLE JOINT | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | INTUSLEEVE / INTUMASTIC HP | /90/0 | 110MM DIA PVC PIPE WITH COUPLING | 51028300.1 | C |
| PVC PIPE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | 80MM DIA PVC PIPE - 160MM DIA SL COLLAR - INTUMASTIC HP | 90/90 | 80MM DIA PVC PIPE PASSING VIA 160MM DIA SL COLLAR | 51028300.1 | E |
| PVC PIPE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | 80MM DIA PVC PIPE - 160MM DIA INTUSLEEVE - INTUMASTIC HP | 90/60 | 80MM DIA PVC PIPE PASSING VIA 160MM DIA INTUSLEEVE | 51028300.1 | F |
| PVC PIPE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | INTUSLEEVE 300 | /60/60 | 160MM DIA PIPE | 46469500.2 | G |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|------------------------------|----------|----------------|-------------|-----------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | | |
| PVC PIPE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | SL COLLAR | /90/60 | 160MM DIA PIPE | 46469500.2 | F |
| BUTELINE PIPE | WALL | 116MM THICK FR PLASTERBOARD/MASONRY/CONCRETE | SL COLLAR / INTUMASTIC HP | /120/120 | 22MM DIA PIPE | 51892000.2 | H |
| BUTELINE PIPE | WALL | 116MM THICK FR PLASTERBOARD/MASONRY/CONCRETE | INTUMASTIC HP | /120/120 | 22MM DIA PIPE | 51892000.2 | I |
| PEX PIPE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /60/0 | 32MM DIA PIPE | 46469500.2 | B |
| PEX PIPE | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 23671.04 | 26 |
| PEX PIPE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 23671.04 | 26 |
| PEX AL PIPE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 23671.04 | 28 |
| PEX AL PIPE | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 23671.04 | 28 |
| PEX AL PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUMASTIC HP | /180/180 | 16MM DIA PIPE | 340885000.9 | V55 |
| PEX PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUMASTIC HP | /180/180 | 16MM DIA PIPE | 340885000.9 | V57 |
| PEX AL PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 340885000.9 | V68 |
| PEX PIPE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 340885000.9 | V69 |
| PVC PIPE | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 50MM DIA PIPE | FCO-3228 | SP13 - 23 |
| HDPE PIPE | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 40M DIA PIPE | FCO-3228 | SP10 |
| PEX PIPE | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 32MM DIA PIPE | FCO-3228 | SP11 |
| PEX AL PIPE | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 16MM DIA PIPE | FCO-3228 | SP12 |
| PVC SPIGOT / PVC FLEXI DRAIN | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | | FCO-3228 | SP18 |
| PEX / AL / PE PIPES | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 32MM DIA PIPE | FCO-3228 | SP24 |
| PVC PIPE | WALL | 116MM THICK FR PLASTERBOARD/MASONRY/CONCRETE | RYANFIRE HPX SEALANT | /120/120 | 50MM DIA PIPE | 51892000.2 | B |
| PVC PIPE | WALL | 128MM THICK GIB WALL | INTUCOLLAR GV | /120/60 | 100MM DIA PIPE | FAR 4035 | G |
| PVC PIPE | WALL | 120MM THICK MASONRY WALL | INTUCOLLAR GV | /120/90 | 100MM DIA PIPE | FAR 4035 | G |
| PVC PIPE | WALL | GIB / MASONRY / CONCRETE | INTUCOLLAR GV | /120/120 | 40MM DIA PIPE | FAR 4035 | G |
| HDPE PIPE | WALL | 128MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /120/120 | 40MM DIA PIPE | 35084000.2 | 17 |
| PVC PIPE | WALL | 128MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /120/120 | 43MM DIA PIPE | 35084000.2 | 20 |
| PVC PIPE | WALL | 192MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUSTRAP | /240/0 | 50MM DIA PIPE | 2600700 | G |
| PVC PIPE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /120/120 | 55MM DIA PIPE | 35319300 | 8 |
| HDPE PIPE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUCOLLAR | /90/90 | 160MM DIA PIPE | 35256800 | 13 - 16 |
| PPR PIPE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUCOLLAR | /90/90 | 75MM DIA PIPE | 35256800 | 17 |
| ABS PIPE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUCOLLAR | /90/90 | 90MM DIA PIPE | 35256800 | 18 |
| PVC PIPE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUCOLLAR | /120/60 | 55MM DIA PIPE | 35256800 | 19 |
| PVC PIPE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUCOLLAR | /60/60 | 160MM DIA PIPE | 35256800 | 20-21 |
| HDPE PIPE | WALL | 130MM THICK GIB / MASONRY / CONCRETE | INTUSLEEVE / ROCKWOOL SLEEVE | /120/120 | 110MM DIA PIPE | 35084000.2 | 18 |
| PVC PIPE | WALL | 130MM THICK GIB / MASONRY / CONCRETE | INTUSLEEVE / ROCKWOOL SLEEVE | /120/120 | 50MM DIA PIPE | 35084000.2 | 19 |
| HDPE PIPE | WALL | 128MM THICK GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /240/120 | 40MM DIA PIPE | 35084000.2 | 17 |
| PVC PIPE | WALL | 128MM THICK GIB / MASONRY / CONCRETE | INTUBATT / INTUSTRAP | /240/240 | 43MM DIA PIPE | 35084000.2 | 20 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|--|--------------------------------------|----------|---|--------------|--------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | | |
| HDPE PIPE | WALL | 100MM THICK MASONRY | INTUMASTIC HP | /120/120 | 40MM DIA | 23671.04 | 29 |
| HDPE PIPE | WALL | 100MM THICK MASONRY | INTUMASTIC HP | /120/120 | 22MM DIA | 23671.04 | 30 |
| PVC PIPE | WALL | KOROK 51 - 30MIN INSULATION WALL SYSTEM | SL COLLAR | /90/30 | 50MM DIA | FP 10847.002 | 5 |
| PVC PIPE | WALL | KOROK 51 - 60MIN INSULATION WALL SYSTEM | SL COLLAR | /90/60 | 50MM DIA | FP 10847.002 | 5 |
| PVC PIPE | WALL | KOROK 51 - 30MIN INSULATION WALL SYSTEM | SL COLLAR | /90/30 | 160MM DIA | FP 10847.002 | 2 |
| PVC PIPE | WALL | KOROK 51 - 60MIN INSULATION WALL SYSTEM | SL COLLAR | /90/60 | 160MM DIA | FP 10847.002 | 2 |
| PVC PIPE | CEILINGS | 26MM THICK GIB | INTUCOLLAR | /60/30 | 110MM DIA PIPE | 35256800 | 22 |
| PVC PIPE | FLOOR | 100MM THICK STAHLTON TIMBER INFILL FLOOR | INTUBATT / SL COLLAR | /60/60 | 150MM DIA PIPE | 51892400.2 | C |
| PE PIPE | FLOOR | 100MM THICK STAHLTON TIMBER INFILL FLOOR | INTUBATT / SL COLLAR | /30/15 | 150MM DIA PIPE | 51892200.2 | B |
| PVC / REHAU RAUTITAN / PEX-AL / BUTELINE PIPES | FLOOR | 100MM THICK STAHLTON TIMBER INFILL FLOOR | INTUBATT / SL COLLAR / INTUMASTIC HP | /60/0 | 25MM DIA PVC / 2X32MM DIA REHAU /50MM DIA PVC / 22MM DIA BUTE | 51892200.2 | D |
| PVC PIPE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 22MM DIA PIPE | 23671.04 | 41 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 34MM DIA PIPE | 23671.04 | 34 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP | /120/120 | 34MM DIA PIPE | 23671.04 | 34 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 48MM DIA PIPE | 23671.04 | 35 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUSTRAP | /120/120 | 48MM DIA PIPE | 23671.04 | 35 |
| PEX PIPE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 23671.04 | 37 |
| PEX AL | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 23671.04 | 39 |
| HDPE PIPE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 40MM DIA PIPE | 23671.04 | 40 |
| PEX PIPE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 23671.04 | 56 |
| HDPE PIPE | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSTRAP / INTUMASTIC | /180/180 | 40MM DIA PIPE | 2600703.2A | C |
| HDPE PIPE | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSLEEVE | /120/120 | 112MM DIA PIPE | 35319300 | 11 |
| PVC PIPE | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSLEEVE | /90/90 | 110MM DIA PIPE | 35319300 | 12 |
| PVC PIPE | FLOOR | 120MM THICK CONCRETE | INTUBATT / INTUSLEEVE | /120/120 | 69MM DIA PIPE | 35319300 | 13 |
| PVC PIPE | FLOOR | 120MM THICK CONCRETE | INTUCOLLAR GV | /120/120 | 100MM DIA PIPE | FAR 4035 | G |
| PVC PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / SL COLLAR | /90/60 | 160MM DIA PIPE | 46812300.1 | 1 |
| HDPE PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / SL COLLAR | /120/120 | 160MM DIA PIPE | 46812300.1 | 2 |
| DBLUE ACOUSTIC PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / SL COLLAR | /120/120 | 160MM DIA PIPE | 46812300.1 | 3 |
| PPR-CT PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / SL COLLAR | /30/30 | 125MM DIA PIPE | 46812300.1 | 4 |
| PVC PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / INTUSTRAP | /90/0 | 110MM DIA PIPE | 46812800.1 | 7 |
| PVC PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUSLEEVE | /120/60 | 160MM DIA PIPE | 46812800.1 | 1 |
| HDPE PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUSLEEVE | /120/60 | 160MM DIA PIPE | 46812800.1 | 2 |
| DBLUE ACOUSTIC PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUSLEEVE | /120/60 | 160MM DIA PIPE | 46812800.1 | 3 |
| PPR-CT PIPE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUSLEEVE | /120/60 | 110MM DIA PIPE | 46812800.1 | 8 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|--|--|----------|-----------------|-------------|-----------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | | |
| PVC PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUSTRAP | /60/60 | 110MM DIA PIPE | 340885000.9 | H20 |
| PVC PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / RF COLLAR | /120/120 | 160MM DIA PIPE | 340885000.9 | H21 - H26 |
| HDPE PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / RF COLLAR | /120/120 | 160MM DIA PIPE | 340885000.9 | H27-H29 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUSTRAP | /180/180 | 48MM DIA PIPE | 340885000.9 | H32-H33 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC HP | /120/120 | 48MM DIA PIPE | 340885000.9 | H35 |
| PVC PIPE / BLAZEMASTER HARTVEL SPRINKLER | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC HP | /180/180 | 34MM DIA PIPE | 340885000.9 | H34 |
| PEX - AL PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 340885000.9 | H49 |
| PEX - AL PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC HP | /180/180 | 16MM DIA PIPE | 340885000.9 | H36 |
| PEX PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC HP | /120/120 | 43MM DIA PIPE | 340885000.9 | H50 |
| PEX PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC HP | /180/180 | 16MM DIA PIPE | 340885000.9 | H38 |
| HDPE PIPE | FLOOR | 150MM THICK CONCRETE | INTUBATT (SINGLE LAYER) / INTUSTRAP / INTUMASTIC | /60/60 | 55MM DIA PIPE | 35319300 | 9 |
| HDPE PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOLLAR | /90/90 | 160MM DIA PIPE | 35256800 | 23 |
| HDPE PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOLLAR | /120/120 | 110MM DIA PIPE | 35256800 | 24 - 26 |
| PPR PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOLLAR | /120/120 | 75MM DIA PIPE | 35256800 | 27 |
| ABS PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOLLAR | /120/120 | 90MM DIA PIPE | 35256800 | 28 |
| PVC PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOLLAR GV | /180/180 | 100MM DIA PIPE | FAR 4035 | G |
| PVC PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOLLAR | /120/120 | 160MM DIA PIPE | 35256800 | 29-32 |
| PVC PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSTRAP | /240/180 | 160MM DIA PIPE | 35256800 | 33-36 |
| PPR PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/180 | 90MM DIA PIPE | 35256800 | 37 |
| HDPE PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/180 | 82MM DIA PIPE | 35256800 | 38 |
| PVC PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/180 | 160MM DIA PIPE | 35256800 | 39-42 |
| HDPE PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/240 | 82MM DIA PIPE | 35084000.2 | 22 |
| PVC PIPE | FLOOR | 150MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/240 | 160MM DIA PIPE | 35084000.2 | 23 |
| PVC PIPE | FLOOR | 150MM THICK CONCRETE | INTUBATT (DOUBLE LAYER) / INTUSTRAP / INTUMASTIC | /60/60 | 110MM DIA PIPE | 35319300 | 10 |
| PVC PIPE | FLOOR | 170MM THICK CONCRETE | INTUCOLLAR GV | /240/240 | 100MM DIA PIPE | FAR 4035 | G |
| PVC PIPE | FLOOR | 175MM THICK CONCRETE | INTUCOMPOUND / INTUSTRAP | /240/240 | 160MM DIA PIPE | 35256800 | 33-36 |
| PPR PIPE | FLOOR | 175MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/240 | 90MM DIA PIPE | 35256800 | 37 |
| HDPE PIPE | FLOOR | 175MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/240 | 82MM DIA PIPE | 35256800 | 38 |
| PVC PIPE | FLOOR | 175MM THICK CONCRETE | INTUCOMPOUND / INTUSLEEVE | /240/240 | 160MM DIA PIPE | 35256800 | 39-42 |
| INSULATED COMBUSTIBLE PIPES | | | | | | | |
| PPR PIPE / 38MM THICK ARMAFLEX | WALL | 116MM THICK FR PLASTERBOARD/MASONRY/CONCRETE | RYANFIRE SL COLLAR | /90/60 | 90MM DIA PIPE | 51892000.2 | A |
| PPR PIPE / 38MM THICK ARMAFLEX | FLOOR | 100MM THICK STAHLTON TIMBER INFILL FLOOR | INTUBATT / SL COLLAR / INTUMASTIC HP | /90/90 | 75MM DIA PIPE | 51892200.2 | C |
| PVC PIPE / 25MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE FLOOR | INTUCOLLAR | /120/120 | 110MM DIA PIPE | 35256800 | 44 |
| PVC PIPE / 30MM THICK ARMAFLEX | FLOOR | 150MM THICK CONCRETE FLOOR | INTUCOLLAR | /120/120 | 21.5MM DIA PIPE | 35256800 | 43 |
| POLYETHYLENE PIPE / 55MM FIBREGLASS | FLOOR | 150MM THICK CONCRETE FLOOR | INTUSTRAP | /120/120 | 15MM DIA PIPE | 35256800 | 45 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|---|----------------|---------------------------------------|-------------|---------|
| ELECTRICAL PENETRATION SERVICES | | | | | | | |
| SINGLE COMMS CABLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | SINGLE LAYER INTUBATT - CLOSED CAVITY - | /120/90 | 1 X 15MM DIA CABLE | 340885000.9 | TABLE 4 |
| TWO X 5 CORE CABLES | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | SINGLE LAYER INTUBATT - CLOSED CAVITY - | /120/90 | 2 X 15MM DIA CABLES | 340885000.9 | TABLE 4 |
| SINGLE ARMoured CABLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | SINGLE LAYER INTUBATT - CLOSED CAVITY - | /120/90 | 1 X 25MM DIA | 340885000.9 | TABLE 4 |
| CABLE BUNDLE - MIXED CABLES | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | SINGLE LAYER INTUBATT - CLOSED CAVITY - ROCKWOOL SLEEVE | /120/60 (MAX) | 13 X CABLES - MIX DIA | 340885000.9 | TABLE 4 |
| BUSWAY / BUSBARS | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /240/0 | VARIOUS TYPES | 340885000.9 | TABLE 2 |
| BUSWAY / BUSBARS | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | 240/240 (MAX) | VARIOUS TYPES | 340885000.9 | TABLE 3 |
| CABLE TRAY OR CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 (MAX) | D1 / D2 CONFIGURATION | 340885000.9 | V1 / V2 |
| CABLE TRAY OR CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | /240/180 | D1 / D2 CONFIGURATION | 340885000.9 | V3 / V4 |
| CABLE TRAY OR CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | D1 / D2 CONFIGURATION | 340885000.9 | V5 / V6 |
| CABLE TRAY OR CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | /240/180 | D1 / D2 CONFIGURATION | 340885000.9 | V7 / V8 |
| COAX CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | 4 X 28MM DIA BUNDLE | 340885000.9 | V9 |
| COAX CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | /240/180 (MAX) | 4 X 28MM DIA BUNDLE | 340885000.9 | V10 |
| CABLE BUNDLE - TPS/COMMS/DATA | WALL | 116MM THICK WALL - FR PLASTERBOARD / MASONRY / CONCRETE WALL | SL COLLAR / INTUMASTIC HP | /120/90 | 25 X TPS / 50XCAT 6 / 50 COMMS CABLES | 51892000.2 | J |
| CABLE BUNDLE | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /60/60 | 4 CABLES | 34084000.2 | 27 |
| CABLE BUNDLE | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT | /60/60 | 4 CABLES | 34084000.2 | 24 |
| CABLE CONDUIT | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUMASTIC HP | /120/120 | 8 X TPS CABLES | 340885000.9 | V60 |
| CABLE TRAY | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /60/60 | 4X21MM DIA & 1X23MM DIA | 34084000.2 | 28 |
| CABLE - SINGLE | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /60/60 | 1 X COAX CABLE | 34084000.2 | 26 |
| CABLE BUNDLE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /90/30 | 5 X TPS CABLES | 51028300.1 | H |
| CABLE BUNDLE | WALL | 116MM THICK WALL - FR PLASTERBOARD / MASONRY / CONCRETE WALL | RYANFIRE HP-X | /60/60 | 8 MIXED OPTICAL CABLES | 56662701.1 | B |
| ELECTRICAL SOCKET BOX | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE WALL | RYANFIRE PUTTY PAD | /90/60 | TESTED BOTH SIDES WALL | 51028300.1 | A / B |
| ELECTRICAL SOCKET BOX | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE WALL | ELECTROPAD | /60/60 | TESTED BOTH SIDES WALL | 34084000.2 | 29/30 |
| CABLE TRAY | WALL | 120MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /60/60 | 4X21MM DIA & 1X23MM DIA | 34084000.2 | 25 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|---------------------------------------|----------|---|-------------|------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | | |
| CABLE BUNDLE - OPTICAL | WALL | 130MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /60/60 | 21 CABLES | 34084000.2 | 63 |
| CABLE BUNDLE - OPTICAL | WALL | 130MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /60/60 | 12 CABLES | 34084000.2 | 64 |
| CABLE BUNDLES - OPTICAL / POWER | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | VARIOUS TYPES | FCO - 3228 | SP VARIOUS |
| CABLE TRAY | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 100MM CABLE TRAY | FCO - 3228 | SP25 |
| CABLE CONDUIT - 26MM DIA | WALL | 90MM THICK WALL - GIB / MASONRY / CONCRETE / 51MM THICK SPEEDWALL | FR BLOCK / INTUMASTIC HP | /60/60 | 6 CABLES | FCO - 3228 | SP5 |
| CABLE BUNDLE - OPTICAL | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 21 CABLES | 340885000.9 | V11 |
| CABLE BUNDLE - OPTICAL | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 12 CABLES | 340885000.9 | V12 |
| CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 21 CABLES | 340885000.9 | V13 |
| CABLE BUNDLE - TPS/ALARM | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /180/120 | 12 CABLES | 340885000.9 | V49 |
| CABLE CONDUIT- 55MM DIA | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 4 CABLES | 340885000.9 | V14 / V15 |
| CABLE TRAY | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 3 CABLES | 340885000.9 | V16 |
| CABLE - SINGLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 10MM DIA CABLE | 340885000.9 | V19 |
| CABLE - SINGLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 8MM DIA FIREFIX GOLD | 340885000.9 | V20 |
| CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 6 X 13MM DIA TPS CABLES | 340885000.9 | V21 |
| CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 3 X 8MM FIREFIX CABLES | 340885000.9 | V22 |
| CABLE - SINGLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 1 CABLE | 340885000.9 | V23 |
| CABLE - SINGLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 1 CABLE | 340885000.9 | V24 |
| CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 12 TPS CABLES | 340885000.9 | V25 |
| CABLE CONDUITS | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /240/120 | 2 X 27MM CONDUITS - 31 CABLES | 340885000.9 | V70 |
| CABLE BUNDLE | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/120 | 6 X TPS / ALARM CABLES | 23671.4 | 11 |
| ELECTRICAL SOCKET BOX | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | ELECTROPAD | /120/120 | TESTED BOTH SIDES WALL | 35256800 | 46/47 |
| ELECTRICAL SOCKET BOX | WALL | 116MM FR PLASTERBOARD/MASONRY/CONCRETE WALL | RYANFIRE PUTTY PAD | /120/120 | TESTED BOTH SIDES WALL - COMPLETE WITH CABLES | 51892000.2 | D |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|--|---------------------------------------|----------|---------------------------------------|------------|--------|
| ELECTRICAL PENETRATION SERVICES | | | | | | | |
| CABLE CONDUIT - 82MM DIA | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUCOLLAR | /120/120 | 65 CABLES | 35256800 | 48 |
| CABLE CONDUIT - 25MM DIA | WALL | 128MM THICK GIB WALL / 100MM THICK MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/120 | 8 X TPS CABLES | 23671.4 | 45 |
| CABLE CONDUITS X2 X 63MM DIA PLUS BUNDLE | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/30 | 2 CABLES PLUS CABLE BUNDLE | 52208000.1 | 20 |
| CABLE LADDER / CABLE TRAY / BUNDLE | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/90 | 8 CABLES | 52208000.1 | 19 |
| CABLE LADDER / CABLE TRAY / BUNDLE | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/90 | 36 CABLES PLUS 40MM DIA BUNDLE | 52208000.1 | 17 |
| CABLE TRAY | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/90 | 5 X POWER CABLES | 52208000.1 | 18 |
| CABLE BUNDLE | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 70MM DIA BUNDLE | 52208000.1 | 10 |
| CABLE CONDUIT - 82MM DIA | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUSTRAP / INTUMASTIC | /120/120 | 65 CABLES | 35256800 | 49 |
| CABLE CONDUITS - ONLY HAVE TREATED | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUSTRAP | /120/120 | 12 CABLES | 35319300 | 14 |
| CABLE CONDUITS - TOUCHING | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUSTRAP | /120/120 | 12 CABLES | 35319300 | 15 |
| CABLE CONDUIT - 55MM DIA | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/120 | 20MM DIA BUNDLE | 35319300 | 16 |
| CABLE CONDUIT - 55MM DIA | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUSTRAP | /60/60 | 6 X TPS / ALARM CABLES | 35319300 | 17 |
| CABLE CONDUIT - 55MM DIA | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUSTRAP | /60/60 | 7 X TPS CABLES | 35319300 | 18 |
| CABLE TRAY | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 16 CABLES | 35256800 | 50 |
| CABLE TRAY OR CABLE BUNDLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 80MM DIA + 61MM DIA + CABLE BUNDLE | 35319300 | 19 |
| CABLE TRAY OR CABLE BUNDLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /120/120 | 80MM DIA + 61MM DIA + CABLE BUNDLE | 35319300 | 20 |
| CABLE BUNDLES - 3 NUMBER | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /60/60 | 30MM DIA + 30MM DIA + 40MM DIA BUNDLE | 35319300 | 21 |
| CABLE BUNDLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 20 DATA CABLES + 5 TPS | 35319300 | 22 |
| CABLE BUNDLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /120/120 | 6 CABLES | 35319300 | 23 |
| CABLE BUNDLE X 2 | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /60/60 | 30MM DIA COAX + 35MM DIA FIRE ALARM | 35319300 | 24 |
| CABLE - SINGLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 1 X TPS CABLE | 35319300 | 25 |
| CABLE - SINGLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 1 X OPTICAL CABLE | 35319300 | 26 |
| CABLE - SINGLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 1 X COAX CABLE | 35319300 | 27 |
| CABLE - SINGLE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/90 | 1 X 21MM DIA CABLE | 35319300 | 28 |
| CABLE BUNDLE | WALL | 130MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 12 X OPTICAL CABLES | 35084000.2 | 64 |
| CABLE BUNDLE | WALL | 130MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 21 CABLES | 35084000.2 | 63 |
| CABLE TRANSIT | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | FIRETHERM CABLE TRANSIT | /120/60 | 140 CABLES | 35319300 | 30 |
| CABLE TRANSIT - CIRCULAR | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | FIRETHERM CABLE TRANSIT - 200MM DIA | /120/120 | 16 X CONDUITS EACH FILLED WITH CABLES | 35319300 | 31 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|--|----------|--|--------------|---------|
| ELECTRICAL PENETRATION SERVICES | | | | | | | |
| CABLE TRANSIT | WALL | 130MM THICK GIB / MASONRY / CONCRETE WALL | FIRETERM CABLE TRANSIT | /120/120 | CABLE TRAY / VARIOUS CABLES | 35084000.2 | 41 |
| CABLE TRANSIT | WALL | 130MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / FIRETERM CABLE TRANSIT | /120/90 | 19 CABLES + CABLE CONDUIT + 2XPVC PIPES | 35084000.2 | 40 |
| CABLE LADDER | WALL | 128MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / SLEEVE | /120/120 | D1 & D2 CABLE CONFIGERATION | 35084000.2 | 42/43 |
| CABLE TRUNKING | WALL | 100MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / INTUPILOW PRO | /120/120 | CABLES - 10% FILL | 35084000.2 | 65 |
| CABLE TRUNKING | WALL | 100MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / INTUPILOW PRO | /120/120 | CABLES - 75% FILL | 35084000.2 | 66 |
| CABLE TRUNKING | WALL | 100MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / INTUPILOW PRO | /120/120 | CABLES - 45% FILL | 35084000.2 | 67 |
| CABLE TRUNKING | WALL | 100MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / INTUPILOW PRO | /120/120 | CABLES - 75% FILL | 35084000.2 | 68 |
| CABLE CONDUIT - 22MM DIA | WALL | 130MM THICK GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/120 | 2 CABLES | 35084000.2 | 33 |
| CABLE CONDUIT - 55MM DIA | WALL | 130MM THICK GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/120 | 4 X CABLES | 35084000.2 | 34 |
| CABLE TRAY / LADDER | WALL | 130MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 4 CABLE TRAYS - 48 CABLES + 100MM DIA BUNDLE | 35084000.2 | 35 |
| CABLE LADDER | WALL | 128MM THICK GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC / SLEEVE | /240/180 | D1 & D2 CABLE CONFIGERATION | 35084000.2 | 42/43 |
| CABLE TRAY OR CABLE BUNDLE | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | D1 & D2 CABLE CONFIGERATION | 23671.4 | 12 & 13 |
| CABLE BUNDLE | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 12 TPS OR ALARM CABLES | 23671.4 | 9 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /180/60 | 52MM DIA CABLE | 35084000.2 | 69 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /240/60 | 2 X 27MM DIA CABLES | 35084000.2 | 70 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /120/90 | 1 X 80MM DIA CABLE | 35084000.2 | 71 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /240/90 | 1 X 62MM DIA CABLE | 35084000.2 | 72 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /180/120 | 10 X 14MM DIA CABLES | 35084000.2 | 73 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /90/90 | 1 X 100MM DIA CABLE BUNDLE | 35084000.2 | 82 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /240/120 | 10 X 13MM DIA CABLES | 35084000.2 | 75 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /180/90 | 10 CABLES | 35084000.2 | 74 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /240/120 | 2 X 21MM DIA CABLES | 35084000.2 | 76 |
| CABLE TRAY | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUCOMPOUND | /240/90 | 3 X 61MM DIA CABLES | 35084000.2 | 78 |
| CABLE BUNDLE | WALL | KOROC 51 - 30 MIN INSULATION WALL SYSTEM | INTUCOLLAR / INTUMASTIC HP | /90/30 | 30 X TPS / 25 X CAT 6 / 10 X 50PR COMMS CABLES | FP 10847.002 | 4 |
| CABLE BUNDLE | WALL | KOROC 51 - 60 MIN INSULATION WALL SYSTEM | INTUCOLLAR / INTUMASTIC HP | /90/60 | 30 X TPS / 25 X CAT 6 / 10 X 50PR COMMS CABLES | FP 10847.002 | 4 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|--|---|----------|---|-------------|--------|
| ELECTRICAL PENETRATION SERVICES | | | | | | | |
| CABLE BUNDLE | CEILINGS | 26MM THICK GIB | INTUMASTIC HP | /60/30 | 6 X TPS CABLES | 35256800 | 51 |
| CABLE BUNDLE | CEILINGS | 26MM THICK GIB | INTUMASTIC HP | /60/30 | 12 CABLES | 35256800 | 52 |
| DOWNLIGHTER COVERS - VENTILLATED | CEILINGS | CEILING THICKNESS OF THE REQUIRED FRL | RYANFIRE VENTILLATED DOWNLIGHTER COVERS | /60/60 | 150MM / 200MM / 250MM / 320MM / 420MM DIA | FAR 4823 | |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | D1 CABLE CONFIGERATION | 23671.4 | 19 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | D2 CABLE CONFIGERATION | 23671.4 | 20 |
| CABLE BUNDLE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 12 TPS / ALARM CABLES | 23671.4 | 16 |
| CABLE BUNDLE | FLOOR | 100MM THICK CONCRETE / MASONRY / HEBEL | INTUMASTIC HP | /120/120 | 6 TPS / ALARMS CABLES | 23671.4 | 18 |
| CABLE BUNDLE - TPS / CAT 6 / COMMS | FLOOR | 100MM THICK STAHLTON TIMBER INFILL FLOOR | INTUBATT / SL COLLAR / INTUMASTIC HP | /180/60 | 25 X TPS / 25 X CAT6 / 10 COMMS CABLES | 51892400.2 | A |
| CABLE TRAY / LADDER | FLOOR | 120MM THICK CONCRETE/MASORY FLOOR | INTUBATT / INTUMASTIC / SLEEVE | /240/180 | 60 X COMMS CABLES | 2600703.2A | H |
| CABLE TRAY / LADDER | FLOOR | 120MM THICK CONCRETE/MASORY FLOOR | INTUBATT / INTUMASTIC / SLEEVE | /180/180 | 13 X MIXED CABLES | 2600703.2A | I |
| CABLE TRAY / LADDER | FLOOR | 120MM THICK CONCRETE/MASORY FLOOR | INTUBATT / INTUMASTIC / SLEEVE | /180/180 | D1 CABLE CONFIGERATION | 35084000.2 | 45 |
| CABLE TRAY / LADDER | FLOOR | 120MM THICK CONCRETE/MASORY FLOOR | INTUBATT / INTUMASTIC / SLEEVE | /240/180 | D2 CABLE CONFIGERATION | 35084000.2 | 44 |
| CABLE BUNDLE | FLOOR | 120MM THICK CONCRETE/MASORY FLOOR | INTUBATT / INTUMASTIC | /120/120 | 21 OPTICAL CABLES | 35084000.2 | 31 |
| CABLE BUNDLE | FLOOR | 120MM THICK CONCRETE/MASORY FLOOR | INTUBATT / INTUMASTIC | /120/120 | 12 OPTICAL CABLES | 35084000.2 | 32 |
| CABLE BUNDLE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / INTUMASTIC | /60/30 | 75 CABLES | 46812300.1 | 5 |
| CABLE BUNDLE | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUMASTIC HP | /120/60 | 75 CABLES | 46812800.1 | 5 |
| CABLE TRAY / LADDER | FLOOR | COMPOSITE FLOORING - 65MM THICK CONCRETE | INTUBATT / INTUMASTIC | /60/30 | 13 CABLES | 46812800.1 | 4 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | D1 CABLE CONFIGERATION | 340885000.9 | H1 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | D2 CABLE CONFIGERATION | 340885000.9 | H2 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /180/180 | D1 CABLE CONFIGERATION | 340885000.9 | H3 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /180/180 | D2 CABLE CONFIGERATION | 340885000.9 | H4 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | D1 CABLE CONFIGERATION | 340885000.9 | H5 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | D2 CABLE CONFIGERATION | 340885000.9 | H6 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /180/180 | D1 CABLE CONFIGERATION | 340885000.9 | H7 |
| CABLE TRAY OR CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /180/180 | D2 CABLE CONFIGERATION | 340885000.9 | H8 |
| CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | 4 X 28MM DIA COAX CABLES | 340885000.9 | H9 |
| CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /180/180 | 4 X 28MM DIA COAX CABLES | 340885000.9 | H10 |
| CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | 21 X OPTICAL CABLES | 340885000.9 | H11 |
| CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | 12 X OPTICAL CABLES | 340885000.9 | H12 |
| CABLE CONDUIT - 50MM DIA | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /120/120 | 2 X 23MM DIA CABLES | 340885000.9 | H13 |
| CABLE CONDUIT - 50MM DIA | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /120/120 | 6 X TPS CABLES | 340885000.9 | H14 |
| CABLE BUNDLE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /180/120 | 12 X TPS CABLES | 340885000.9 | H30 |
| CABLE CONDUIT - 25MM DIA | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /120/120 | 8 X TPS CABLES | 340885000.9 | H41 |
| CONDUIT BUNDLE - 3 X 27MM DIA | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /240/120 | 24 DATA CABLES + 7 COAX CABLES | 340885000.9 | H51 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|--------------------------------------|--|---------------|---|-------------|---------------|
| ELECTRICAL PENETRATION SERVICES | | | | | | | |
| BUSWAY / BUSBARS (VARIOUS TYPES) | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC | /240/0 | VARIOUS TYPES - REFER TO REPORT | 340885000.9 | TABLE 7 |
| BUSWAY / BUSBARS (VARIOUS TYPES) | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /240/240 | VARIOUS TYPES - REFER TO REPORT | 340885000.9 | TABLE 8/8A/8B |
| CABLE BUNDLE | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /90/30 | 100MM DIA CABLE BUNDLE | 52208000.1 | 1 |
| CABLE/CABLE BUNDLES | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/120 | 18MM DIA / 20MM DIA / 14MM DIA | 52208000.1 | 2+3+4 |
| CABLE BUNDLE | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/120 | 3 CABLES | 52208000.1 | 5 |
| CABLE TRAY / LADDERS | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/90 (MAX) | 1X52MM DIA + 2X27MM DIA + 1X80MM DIA | 52208000.1 | 6 |
| CABLE TRAY / LADDERS | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/30 | 1 X 60MM DIA | 52208000.1 | 7 |
| CABLE TRAY / LADDERS | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/90 (MAX) | 41 X MIXED DIA CABLES | 52208000.1 | 8 |
| CABLE TRAY / LADDERS | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/30 | 1X17MM DIA + 1X23MM DIA + 100MM DIA BUNDLE | 52208000.1 | 9 |
| CABLE BUNDLE | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC (SINGLE LAYER) | /60/30 | 7 MIXED CABLES | 35256800 | 53 |
| CABLE CONDUIT - 50MM DIA | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC / INTUSTRAP - SINGLE LAYER | /240/180 | 8 X TPS CABLES | 35319300 | 33 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /120/30 | 7 MIXED CABLES | 35256800 | 54 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /240/60 | 1 X 52MM DIA CABLE | 35084000.2 | 83 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /240/120 | 2 X 27MM DIA CABLES | 35084000.2 | 84 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /240/60 | 1 X 80MM DIA CABLE | 35084000.2 | 85 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /240/120 | 20 X 14MM DIA CABLES | 35084000.2 | 88/89 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /240/60 | 2X21MM DIA CABLES | 35084000.2 | 90 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /180/120 | 3 X 61MM DIA CABLES | 35084000.2 | 92 |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /240/240 | 1 X 17MM DIA CABLE | 35084000.2 | 94 |
| CABLE TRAY | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /120/120 | 100MM DIA CABLE BUNDLE | 35084000.2 | 96 |
| CABLE TRANSIT | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | CABLE TRANSIT / INTUMASTIC HP | /120/30 | 36 CABLES | 35084000.2 | 38 |
| CABLE CONDUIT - 50MM DIA | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/120 | 3 - 6 CABLES | 35084000.2 | 36 - 37 |
| CABLE BUNDLE | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/120 | 80MM DIA BUNDLE | 352568000 | 57 |
| CABLE CONDUIT - 50MM DIA | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC / INTUSTRAP | /240/180 | 15 CABLES | 35319300 | 34 |
| CABLE BUNDLES | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /180/120 | 10 X DATA + 5 X OPTICAL + 3 X ALARM CABLES | 35319300 | 35 |
| CABLE BUNDLES | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /60/60 | 30MM DIA + 50MM DIA CABLE BUNDLE | 35319300 | 36 |
| CABLE BUNDLE | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOLLAR | /120/120 | 61 CABLES | 35256800 | 55 |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND / INTUBATT / INTUMASTIC | /240/120 | 1 X 52MM DIA/2 X 27MM DIA/1 X 80MM DIA CABLES | 35084000.2 | 62 |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND / INTUBATT / INTUMASTIC | /240/240 | 1 X 58MM DIA CABLE | 35084000.2 | 61 |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND / INTUBATT / INTUMASTIC | /240/120 | 35 X MIXED SIZE CABLES | 35084000.2 | 59 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|--------------------------------------|----------------|--|------------|-----------|
| ELECTRICAL PENETRATION SERVICES | | | | | | | |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND / INTUBATT / INTUMASTIC | /240/120 | 1X100MM DIA BUNDLE + 1X17MM DIA + 1X23MM DIA | 35084000.2 | 60 |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /180/60 | 3 X 47MM DIA CABLES | 35084000.2 | 91 |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /120/120 | 1X300MM 1X200MM 1X500MM WIDE CABLE LADDERS/TRAYS | 35084000.2 | 39 |
| CABLE TRAY / LADDER | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND / INTUBATT / INTUMASTIC | /240/120 | 35 CABLES - RANGING FROM 14MM - 47MM DIA | 35256800 | 58 |
| CABLE BUNDLE | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /120/120 | 80MM DIA BUNDLE | 352568000 | 56 |
| CABLE CONDUIT - 55MM DIA | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUMASTIC HP | /240/120 | 24 MIXED CABLES | 35319300 | 32 |
| CABLE CONDUIT - 55MM DIA | FLOOR | 175MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC (SINGLE LAYER) | /240/240 | 8 X TPS CABLES | 35319300 | 33 |
| SEISMIC/CONSTRUCTION JOINTS | | | | | | | |
| BLANK SEAL | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 300MM X 310MM VOID | 35319300 | 39 |
| BLANK SEAL | WALL | 150MM THICK CONCRETE WALL | INTUBATT / INTUMASTIC | /240/240 | 1500 X 1500MM VOID | 35319300 | 40 |
| BLANK SEAL | WALL | 110MM THICK WALL - GIB/ MASONRY / CONCRETE / HEBEL | INTUBATT / INTUMASTIC | /120/120 | 3000 X 1200MM VOID | 27186.25 | V 2 / V3 |
| BLANK SEAL | WALL | 150MM THICK MASONRY / CONCRETE / HEBEL WALL | INTUBATT / INTUMASTIC | /240/240 | 1200 X 1200 VOID | 27186.25 | V1 |
| BLANK SEAL | WALL | 51MM / 64MM / 78MM THICK SPEED WALL | INTUBATT / INTUMASTIC | /120/120 (MAX) | 2400 X 1000 VOID | 27186.25 | V4 |
| BLANK SEAL | WALL | 110MM THICK GIB WALL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 1000X1000 OR 600MM DIA CORE DRILLED HOLE | 27186.25 | V5 |
| BLANK SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 1000X1000 OR 600MM DIA CORE DRILLED HOLE | 27186.25 | V5 |
| BLANK SEAL | WALL | 110MM THICK GIB WALL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 1000X1000 OR 600MM DIA CORE DRILLED HOLE | 27186.25 | V6 |
| BLANK SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 1000X1000 OR 600MM DIA CORE DRILLED HOLE | 27186.25 | V6 |
| BLANK SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1200 X 600 VOID | 27186.25 | V7 |
| BLANK SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1200 X 600 VOID | 27186.25 | V7 |
| BLANK SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1200 X 600 VOID | 27186.25 | V8 |
| BLANK SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1200 X 600 VOID | 27186.25 | V8 |
| BLANK SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1000 X 400 VOID | 27186.25 | V9 |
| BLANK SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1000 X 400 VOID | 27186.25 | V9 |
| BLANK SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1000 X 400 VOID | 27186.25 | V10 |
| BLANK SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1000 X 400 VOID | 27186.25 | V10 |
| BLANK SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC | /120/120 | 1000 X 400 VOID | 27186.25 | V11 / V12 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
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| SEISMIC/CONSTRUCTION JOINTS | | | | | | | |
| BLANK SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 1000 X 400 VOID | 27186.25 | V11 / V12 |
| BLANK SEAL | WALL | 77MM THICK SPEED WALL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1200X600 VOID | 27186.25 | V13 |
| BLANK SEAL | WALL | 105MM THICK CROSS LAMINATED TIMBER (CLT) | INTUBATT / INTUMASTIC | /90/90 | 1200 X 600 VOID | 27186.25 | V35 |
| BLANK SEAL | WALL | KOROK 51 WALL 30 MINUTE INSULATION SYSTEM | INTUBATT | /90/30 | 700X400 OPENING | FP10847-002 | 1 |
| BLANK SEAL | WALL | KOROK 51 WALL 60 MINUTE INSULATION SYSTEM | INTUBATT | /90/60 | 700X400 OPENING | FP10847-002 | 1 |
| LINEAR GAP SEAL | WALL | 120MM THICK GIB / MASONRY / CONCRETE WALL | INTUMASTIC | /60/0 | 10X10MM GAP | 35084000.2 | 46 |
| LINEAR GAP SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC | /240/240 | 600MM WIDE X INFINITE LENGTH | 27186.25 | V14 / V15 |
| LINEAR GAP SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /240/240 | 600MM WIDE X INFINITE LENGTH | 27186.25 | V14 / V15 |
| LINEAR GAP SEAL | WALL | 110MM THICK GIB WALL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 400MM WIDE X INFINITE LENGTH | 27186.25 | V16 |
| LINEAR GAP SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 400MM WIDE X INFINITE LENGTH | 27186.25 | V16 |
| LINEAR GAP SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC | /120/120 | 1200MM WIDE X INFINITE LENGTH | 27186.25 | V17 / V18 |
| LINEAR GAP SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 1200MM WIDE X INFINITE LENGTH | 27186.25 | V17 / V18 |
| LINEAR GAP SEAL | WALL | 110MM THICK GIB WALL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 1000MM WIDE X INFINITE LENGTH | 27186.25 | V19 / V20 / V21 |
| LINEAR GAP SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 1000MM WIDE X INFINITE LENGTH | 27186.25 | V19 / V20 / V21 |
| LINEAR GAP SEAL | WALL | 110MM THICK GIB WALL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 600MM WIDE X INFINITE LENGTH | 27186.25 | V22 / V23 / V24 |
| LINEAR GAP SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 600MM WIDE X INFINITE LENGTH | 27186.25 | V22 / V23 / V24 |
| LINEAR GAP SEAL | WALL | 110MM THICK GIB WALL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 400MM WIDE X INFINITE LENGTH | 27186.25 | V25 / V26 |
| LINEAR GAP SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 400MM WIDE X INFINITE LENGTH | 27186.25 | V25 / V26 |
| LINEAR GAP SEAL | WALL | 110MM THICK GIB WALL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 601 - 1200MM WIDE X INFINITE LENGTH | 27186.25 | V27 |
| LINEAR GAP SEAL | WALL | MASONRY / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC | /120/120 | 601 - 1200MM WIDE X INFINITE LENGTH | 27186.25 | V27 |
| LINEAR GAP SEAL | WALL | SEALING BETWEEN FLOOR AND ABOVE STRUCTURAL STEEL BEAMS | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 600MM WIDE X 4000MM LONG VOID | 27186.25 | V28 |
| LINEAR GAP SEAL | WALL | 78MM THICK SPEED WALL | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 600MM WIDE X INFINITE LENGTH | 27186.25 | V29 |
| LINEAR GAP SEAL | WALL | 150MM CONCRETE/AERATED/MASONRY WALL | INTUMASTIC | /180/180 | 35MM GAP | 35084000.2 | 49 |
| LINEAR GAP SEAL | WALL | 175MM THICK AERATED BLOCK WALL | INTUMASTIC | /240/240 | 35MM GAP | 35084000.2 | 49 |
| LINEAR GAP SEAL | WALL | 150MM THICK AERATED BLOCK WALL | INTUSIL | /180/180 | 35MM GAP | 35084000.2 | 50 |
| LINEAR GAP SEAL | WALL | 175MM THICK AERATED BLOCK WALL | INTUSIL | /240/240 | 35MM GAP | 35084000.2 | 50 |
| LINEAR GAP SEAL | WALL | 142MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC HP | /120/120 | 25MM GAP | 52208000.1 | 21 |
| LINEAR GAP SEAL | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC - BARE TIMBER FRAMING | /120/120 | 30MM GAP | 35256800 | 60 / 61 |
| LINEAR GAP SEAL | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUMASTIC | /120/120 | 40MM GAP | 35319300 | 38 |
| LINEAR GAP SEAL | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUSIL - BARE TIMBER FRAMING | /120/120 | 30MM GAP | 35256800 | 62 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|---|-------------|--|---|-----------------|---|------------|---------------|
| SEISMIC/CONSTRUCTION JOINTS | | | | | | | |
| LINEAR GAP SEAL | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUSIL | /120/120 | 40MM GAP | 35319300 | 37 |
| LINEAR GAP SEAL | WALL | 150MM THICK CONCRETE WALL | INTUSPAN PRO | /30/30 | 150MM WIDE GAP | 35084000.2 | 111 |
| LINEAR GAP SEAL | WALL | 150MM THICK CONCRETE WALL | INTUSPAN | /120/120 | 100MM WIDE GAP | 35084000.1 | 53 |
| HEAD OF WALL JOINT | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /120/120 | 300MM WIDE GAP | 35256800 | 59 |
| WALL - INTUBATT - MASTIC GLUED JOINTS | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC | /240/240 | 1500 X 1500 VOID | 35319300 | 40 |
| TOP OF SERVICE SHAFT / RISER | WALL | GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC - FIXED TO FRAMING - FIXED AT 2 POINTS | 120/120/120 | | 27186.25 | H36 |
| TOP OF SERVICE SHAFT / RISER | WALL | GIB / MASONRY / CONCRETE WALL | INTUBATT / INTUMASTIC - FIXED TO FRAMING - FIXED AT 1 POINT | 120/120/120 | | 27186.25 | H37 |
| BULK HEAD - FRAMED | WALL/FLOOR | FLOOR THICKNESS OF REQUIRED FRL - WALL- GIB/ CONCRETE/SPEEDWALL | INTUBATT / INTUMASTIC / FRAMING | 120 / 120 / 120 | 1200MM X 600MM OR 1200MM HIGH X INFINITE LENGTH | 27186.25 | H26/H28/ H30 |
| BULK HEAD - NON FRAMED - SHAFT/ ENCLOSURE | WALL/FLOOR | FLOOR THICKNESS OF REQUIRED FRL - WALL- GIB/ CONCRETE/SPEEDWALL | INTUBATT / INTUMASTIC - FIXED AT 2 POINTS | 120/120/120 | 1200MM X 700MM X INFINITE LENGTH | 27186.25 | H31 |
| VERTICAL RISERS | WALL | 77MM SPEEDWALL / CONCRETE / HEBEL WALL THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED TO FRAMING - FIXED AT 4 POINTS | 120/120/120 | 700 X 1200 X 300MM VOID | 27186.25 | V34 |
| VERTICAL RISERS | WALL | CONCRETE / MASONRY / HEBEL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 4 SIDES | 120/120/120 | 1200 X 1200 X 4M LONG VOID | 27186.25 | V30 |
| VERTICAL RISERS | WALL | CONCRETE / MASONRY / HEBEL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 3 SIDES | 120/120/120 | 1200 X 1200 X 4M LONG VOID | 27186.25 | V31 |
| VERTICAL RISERS | WALL | CONCRETE / MASONRY / HEBEL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 2 SIDES | 120/120/120 | 1200 X 1200 X 4M LONG VOID | 27186.25 | V32 |
| VERTICAL RISERS | WALL | CONCRETE / MASONRY / HEBEL | INTUBATT / INTUMASTIC - FIXED BETWEEN TWO WALLS | 120/120/120 | 1200 X 1200 X 4M LONG VOID | 27186.25 | V33 |
| HORIZONTAL LINEAR GAP SEAL | WALL | 105MM THICK CROSS LAMINATED TIMBER (CLT) | INTUBATT / INTUMASTIC - FRICTION FIT | /90/90 | 600MM WIDE X INFINITE LENGTH | 27186.25 | V37 |
| VERTICAL RISERS | WALL | 105MM THICK CROSS LAMINATED TIMBER (CLT) | INTUBATT / INTUMASTIC - FRICTION FIT | /90/90 | 600MM WIDE X INFINITE LENGTH | 27186.25 | V36 |
| INTUBATT CEILING | CEILING | INTUBATT CEILING FIXED TO TIMBER FRAME | INTUBATT / INTUMASTIC - DOUBLE LAYER | 120/120/120 | FULL SCALE TEST | 27186.25 | H20/21/22/ 25 |
| BULK HEAD - NON FRAMED | CEILING | GIB CEILING / TIMBER FLOOR | INTUBATT / INTUMASTIC - FIXED TO FRAMING | 120/120/120 | 600MM WIDE X INFINITE LENGTH | 27186.25 | H23 / H24 |
| BLANK SEAL | CEILING | GIB | INTUBATT / INTUMASTIC | /120/120 (MAX) | | 27186.25 | H38 / H39 |
| BLANK SEAL | FLOOR | CONCRETE / HEBEL FLOOR | INTUBATT / INTUMASTIC - DOUBLE LAYER - BOTH SITTING ABOVE FLOOR LEVEL | /240/240 | 1000 X 1000 OR 600MM DIA CORE HOLE | 27186.25 | H10 |
| BLANK SEAL | FLOOR | CONCRETE / HEBEL FLOOR | INTUBATT / INTUMASTIC - DOUBLE LAYER - ONE LAYER PROUD OF FLOOR LEVEL | /240/240 | 600MM WIDTH - UPTO 2.4M2 AREA | 27186.25 | H9 |
| BLANK SEAL | FLOOR | CONCRETE / HEBEL FLOOR | INTUBATT / INTUMASTIC - DOUBLE LAYER - ONE LAYER PROUD OF FLOOR LEVEL | /240/240 | 1000 X 1000 OR 600MM DIA CORE HOLE | 27186.25 | H6 |
| BLANK SEAL | FLOOR | 120MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 440MM WIDE X 4M LONG VOID | 27186.25 | H11 |
| BLANK SEAL | FLOOR | 120MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /120/120 | 600MM WIDE X UP TO 2.4M2 AREA | 27186.25 | H8 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|------------------------------------|-------------|--------------------------------|---|----------|---|------------|-----------------|
| SEISMIC/CONSTRUCTION JOINTS | | | | | | | |
| BLANK SEAL | FLOOR | 120MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /120/120 | 1200 X 600 OR 600MM MAX CORE DRILL VOID | 27186.25 | H4 |
| BLANK SEAL | FLOOR | 120MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /120/120 | 1200 X 1200 VOID | 27186.25 | H5 |
| BLANK SEAL | FLOOR | 120MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /120/120 | 4000X 600 VOID | 27186.25 | H7 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /240/240 | 1200 X 1200 VOID | 27186.25 | H2 / H3 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /240/240 | 1200 X 600 VOID | 27186.25 | H1 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUCOMPOUND - 100MM THICK | /240/180 | 800 X 600MM VOID | 35256800 | 68 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/60 | 500 X 500MM VOID | 35256800 | 64 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - DOUBLE LAYER - FITTED FROM BELOW - 50MM O/LAP | /120/120 | 500 X 500MM VOID | 35256800 | 65 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - DOUBLE LAYER - WITHIN A GIB LINED OPENING | /120/120 | 400X450MM VOID | 35319300 | 43 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - SINGLE LAYER - FIXED TO TIMBER FRAMING BELOW | /120/120 | 400 X 450MM VOID | 35319300 | 42 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 1000 X 400MM VOID | 27186.25 | H12 / H13 / H14 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT/INTUMASTIC - SINGLE LAYER - FIXED TO LOWER FLOOR SURFACE LEVEL | /120/120 | 1100 X 400MM VOID | 35319300 | 41 |
| BLANK SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - FIXED TO TIMBER FRAME | /120/60 | 200MM WIDE VOID | 35256800 | 66 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - TRIPLE LAYER | /240/240 | 600MM WIDE X INFINITE LENGTH | 27186.25 | H15 / H17 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - DOUBLE LAYER WITH EXTRA MASTIC FILLET | /240/240 | 600MM WIDE X INFINITE LENGTH | 27186.25 | H16 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - SINGLE LAYER | /120/120 | 440MM WIDE X INFINITE LENGTH | 27186.25 | H18 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC - SINGLE LAYER - FIXED ABOVE FLOOR SLAB LEVEL | /120/120 | 400MM WIDE X INFINITE LENGTH | 27186.25 | H19 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUMASTIC | /180/120 | 35M GAP | 35084000.2 | 47 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUMASTIC | /180/180 | 210MM GAP | 35084000.2 | 51 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSIL | /180/180 | 35MM GAP | 35084000.2 | 48 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSIL - 20MM THICK - FITTED FLUSH WITH TOP OF FLOOR LEVEL | /120/120 | 80MM GAP | 35256800 | 70 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSIL - 20MM THICK - FITTED FLUSH WITH UNDERSIDE OF FLOOR LEVEL | /120/90 | 80MM GAP | 35256800 | 71 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSIL | /180/180 | 120MM GAP | 35084000.2 | 52 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSIL | /120/120 | 220MM GAP | 35256800 | 67 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSPAN 30X150 | /120/0 | 25MM GAP | 35084000.2 | 106 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSPAN 50X50 | /240/60 | 50MM GAP | 35084000.2 | 107 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSPAN 75X50 | /120/60 | 75MM GAP | 35084000.2 | 108 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSPAN 100 X 75 | /240/120 | 100MM GAP | 35084000.2 | 109 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSPAN - 100 X 100 WITH Z CLIPS | /60/60 | 100MM GAP | 35256800 | 63 |
| LINEAR GAP SEAL | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSPAN 150 X 150 | /240/180 | 150MM GAP | 35084000.2 | 110 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|--|-------------|---|-------------|----------|
| SEISMIC/CONSTRUCTION JOINTS | | | | | | | |
| BULK HEAD - NON FRAMED - SHAFT/ENCLOSURE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED AT 2 POINTS | 120/120/120 | 1200MM X 700MM X INFINITE LENGTH | 27186.25 | H32 |
| BULK HEAD - NON FRAMED - SHAFT/ENCLOSURE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED AT 3 POINTS | 120/120/120 | 600MM X 650MM X INFINITE LENGTH | 27186.25 | H33 /H34 |
| BULK HEAD - NON FRAMED - SHAFT/ENCLOSURE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED AT 4 POINTS | 120/120/120 | 1200MM X 700MM X INFINITE LENGTH | 27186.25 | H35 |
| BULK HEAD - FRAMED | WALL/FLOOR | FLOOR THICKNESS OF REQUIRED FRL - WALL-GIB/CONCRETE/SPEEDWALL | INTUBATT / INTUMASTIC / FRAMING | 120/120/120 | 1200MM X 600MM OR 1200MM HIGH X INFINITE LENGTH | 27186.25 | H26 |
| BULK HEAD - FRAMED | WALL/FLOOR | FLOOR THICKNESS OF REQUIRED FRL - WALL-GIB/CONCRETE/SPEEDWALL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 2 SIDES | 120/120/120 | 1200MM X 600MM OR 1200MM HIGH X INFINITE LENGTH | 27186.25 | H28 |
| BULK HEAD - FRAMED | FLOOR | FLOOR THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 3 SIDES | 120/120/120 | 1200MM X 600MM OR 1200MM HIGH X INFINITE LENGTH | 27186.25 | H29 |
| BULK HEAD - FRAMED | WALL/FLOOR | FLOOR THICKNESS OF REQUIRED FRL - WALL-GIB/CONCRETE/SPEEDWALL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 2 SIDES | 120/120/120 | 600MM X 650MM X INFINITE LENGTH | 27186.25 | H30 |
| BULK HEAD - NON FRAMED | WALL/FLOOR | FLOOR THICKNESS OF REQUIRED FRL - WALL-GIB/CONCRETE/SPEEDWALL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 2 SIDES | 120/120/120 | 1200MM X 700MM X INFINITE LENGTH | 27186.25 | H31 |
| BULK HEAD - NON FRAMED | WALL/FLOOR | FLOOR THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 2 SIDES | 120/120/120 | 1200MM X 700MM X INFINITE LENGTH | 27186.25 | H32 |
| BULK HEAD - NON FRAMED | FLOOR | FLOOR THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 3 SIDES | 120/120/120 | 1200MM X 650MM X INFINITE LENGTH | 27186.25 | H33/H34 |
| BULK HEAD - NON FRAMED | FLOOR | FLOOR THICKNESS OF REQUIRED FRL | INTUBATT / INTUMASTIC - FIXED AT PERIMETER - 4 SIDES | 120/120/120 | 1200MM X 700MM X INFINITE LENGTH | 27186.25 | H35 |
| BLANK SEAL | FLOOR | 175MM THICK CONCRETE FLOOR | INTUCOMPOUND - 100MM THICK | /240/240 | 600X800MM VOID | 35256800 | 68 |
| LINEAR GAP SEAL | FLOOR | 175MM THICK CONCRETE FLOOR | INTUMASTIC | /240/240 | 210MM GAP | 35084000.2 | 51 |
| LINEAR GAP SEAL | FLOOR | 175MM THICK CONCRETE FLOOR | INTUSIL | /240/240 | 35MM GAP | 35084000.2 | 48 |
| LINEAR GAP SEAL | FLOOR | 175MM THICK CONCRETE FLOOR | INTUSIL | /240/240 | 120MM GAP | 35084000.2 | 52 |
| LINEAR GAP SEAL | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | TBA TITAN FIRE CURTAIN WITH ROCKWOOL BELOW | /120/120 | 1100MM GAP | FCO-2896 | 8 |
| LINEAR GAP SEAL | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | TBA TITAN FIRE CURTAIN | /120/60 | 1100MM GAP | FCO-2896 | 8 |
| LINEAR GAP SEAL | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | TBA PLUS 60 FIRE CURTAIN | /120/30 | 1100MM GAP | FCO-2896 | 8 |
| LINEAR GAP SEAL | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | TBA PHOENIX FIRE CURTAIN | /120/0 | 1100MM GAP | FCO-2896 | 8 |
| HVAC | | | | | | | |
| LORIENT INTUMESCENT DAMPER | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / LORIENT VENT | /120/120 | 450X450 INTUMESCENT DAMPER | 340885000.9 | V46 |
| DAMPER - MECHANICAL | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC | /120/120 | 2400 X 2400 DAMPER | 340885000.9 | V47 |
| INTUVENT SLEEVE | WALL | 145MM THICK WALL - GIB / MASONRY / CONCRETE | INTUVENT SLEEVE | /120/120 | 152MM DIA OPENING | 352568000 | 72 |
| DAMPER - MECHANICAL | WALL | 130MM THICK GIB / MASONRY / CONCRETE | INTUVENT / INTUBATT / INTUMASTIC | /60/30 | 510 X 260 DUCT | 35084000.2 | 55 |
| DAMPER - MECHANICAL | WALL | 130MM THICK CONCRETE / MASONRY WALL | INTUBATT / INTUMASTIC | /120/0 | 400X400 DUCT | 35084000.2 | 56 |
| STEEL DUCT | WALL | 150MM THICK CONCRETE / MASONRY WALL | INTUMASTIC | /120/0 | 600X300 DUCT | 35084000.2 | 54 |
| DAMPER - MECHANICAL | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /180/0 | ACTION AIR | 35084000.2 | 58 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|---|-------------|---|---|----------|--|--------------|--------|
| HVAC | | | | | | | |
| DAMPER - MECHANICAL | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUCOMPOUND | /240/0 | ACTION AIR | 35256800 | 74 |
| DAMPER - MECHANICAL | FLOOR | 150MM THICK CONCRETE / MASONRY FLOOR | INTUBATT / INTUMASTIC | /120/0 | ACTION AIR | 35084000.2 | 57 |
| MIXED SERVICE PENETRATION DEVICES | | | | | | | |
| COPPER PIPES / ARMAFLEX / PVC PIPE / CABLES | WALL | 100MM THICK WALL - FR PLASTERBOARD / MASONRY / SPEEDWALL / CLT | INTUBATT / INTUMASTIC HP | /180/120 | BUNDLE | 340885000.9 | V59 |
| COPPER PIPES /PAIR COIL / PVC PIPE / CABLES | WALL | 116MM THICK WALL - FR PLASTERBOARD / MASONRY / CONCRETE | SL COLLAR - 110MM DIA | /90/30 | 25MM PVC PIPE / 5 CABLES / 3 PAIR COIL | 46469500.2 | D |
| COPPER PIPES /PAIR COIL / PVC PIPE / CABLES | WALL | 116MM THICK WALL - FR PLASTERBOARD / MASONRY / CONCRETE | INTUMASTIC HP - 110MM DIA OPENING | /90/60 | 25MM PVC PIPE / 5 CABLES / PAIR COIL | 46469500.2 | E |
| COPPER PIPES / ARMAFLEX / PVC PIPE / CABLES | WALL | 150MM THICK MASONRY / CONCRETE WALL | INTUMASTIC HP / PENOWRAP | /120/120 | 9X13MM COPPER PIPES / 20XTPS CABLES/PVC PIPE | 23671.04 | 46 |
| COPPER PIPES / ARMAFLEX / PVC PIPE / CABLES | WALL | 110MM THICK WALL (MINIMUM) - FR PLASTERBOARD / MASONRY / HEBEL / 77MM SPEEDWALL | INTUBATT / INTUMASTIC HP | /120/120 | 9X13MM COPPER PIPES / 20XTPS CABLES/PVC PIPE | 340885000.9 | V61 |
| COPPER PIPE / CABLE BUNDLE | WALL | 110MM THICK WALL (MINIMUM) - FR PLASTERBOARD / MASONRY / HEBEL / 77MM SPEEDWALL | RF COLLAR | /120/120 | COPPER PIPE / ALARM CABLES / COMMS CABLES | 340885000.9 | V17 |
| PVC PIPES / DATA / TPS CABLES / PEX PIPE / BEER LINES | WALL | 116MM THICK WALL - FR PLASTERBOARD / MASONRY / CONCRETE | RYANFIRE SL COLLAR - INVERTED / INTUMASTIC HP | /90/0 | 80MM/55MM DIA PVC PIPE/20 MIX CABLES/PEX PIPE / BEER LINE | 51028300.1 | D |
| A/C PAIR COIL / TPS CABLES / PVC PIPE | WALL | 116MM THICK WALL - FR PLASTERBOARD / MASONRY / CONCRETE | RYANFIRE SL COLLAR - INTUMASTOC HP | /90/0 | 3 X A/C PAIR COIL / 6 X TPS CABLES / 1 X 32MM DIA PVC PIPE | 51028300.1 | G |
| A/C PAIR COIL / TPS CABLES / PVC PIPE | WALL | 116MM THICK WALL - FR PLASTERBOARD / MASONRY / CONCRETE | INTUBATT / INTUMASTIC HP | /120/60 | 4 X A/C PAIR COIL / 6 TPS CABLES / 1X25MM DIA PVC PIPE | 51892000.2 | E |
| A/C PAIR COIL/TPS CABLES / PVC PIPE | FLOOR | 100MM THICK STAHLTON TIMBER INFILL FLOOR | INTUBATT / SL COLLAR / INTUMASTIC HP | /90/30 | 4 X PAIR COIL / 1 X 25MM DIA PVC PIPE / 6 X TPS CABLES | 51892200.2 | A |
| COPPER PIPES / ARMAFLEX / PVC PIPE / CABLES | FLOOR | 100MM CONCRETE / MASONRY WALL | INTUMASTIC HP / PENOWRAP | /120/120 | 9X13MM COPPER PIPES / 20XTPS CABLES/PVC PIPE | 23671.4 | 42 |
| COPPER PIPES / TPS CABLES | FLOOR | 100MM CONCRETE / MASONRY WALL | INTUMASTIC HP | /120/120 | 6 X 13MM DIA COPPER PIPES / 6 X TPS CABLES | 23671.4 | 44 |
| PAIR COIL / PVC PIPE / TPS CABLES | FLOOR | COMPOSITE FLOORS - 65MM THICK CONCRETE | INTUBATT / INTUMASTIC / INTUMASTIC HP | /120/60 | PAIR COIL / 25MM DIA PVC PIPE / TPS CABLES | 46812300.1 | 9 |
| CABLE CONDUIT / PVC PIPE / TPS CABLES | FLOOR | COMPOSITE FLOORS - 65MM THICK CONCRETE | INTUBATT / INTUMASTIC / INTUMASTIC HP / INTUSTRAP | /90/60 | 50MM DIA PVC / 30MM DIS PEX / 50MM DIA CONDUIT | 46812300.1 | 8 |
| A/FLEX PAIR COIL / CABLES / PVC PIPE | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / INTUMASTIC HP | /180/120 | A/FLEX PAIR COIL / CABLES / PVC PIPE | 340885000.9 | H40 |
| A/FLEX PAIR COIL/CABLES/PVC PIPE - CABLE TRAY/NO TRAY | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / INTUMASTIC HP / PENOWRAP | /120/120 | 9 X COPPER PIPES / PVC PIPE / 20 X TPS CABLES | 340885000.9 | H42 |
| CABLES / CONDUITS / TPS CABLES / PVC PIPE | FLOOR | 150MM CONCRETE / MASONRY FLOOR | INTUSLEEVE / INTUSIL | /240/60 | 20 X OPTICAL / 8 X TPS CABLES / 4 X PVC PIPES | 35319300 | 44 |
| A/C PAIR COIL/PVC PIPE/TPS CABLES | FLOOR | KOROK 51 - 30 MIN INSULATION WALL SYSTEM | SL COLLAR / INTUMASTIC HP | /90/30 | 1X25MM PVC PIPE/S X PAIR COIL/6XTPS CABLES | FP 10847.002 | 3 |
| A/C PAIR COIL/PVC PIPE/TPS CABLES | FLOOR | KOROK 51 - 60 MIN INSULATION WALL SYSTEM | SL COLLAR / INTUMASTIC HP | /90/60 | 1X25MM PVC PIPE/S X PAIR COIL/6XTPS CABLES | FP 10847.002 | 3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report No. | ID/Ref |
|--|-------------|---|----------------------------------|----------|--|-------------|-----------|
| MISCELLANEOUS PENETRATIONS | | | | | | | |
| INSPECTION OPENING | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / INTUSPAN | /120/120 | 200 X 114MM | 340885000.9 | V48 |
| TIMBER JOIST | WALL | 145MM THICK WALL - CONCRETE / MASONRY / HEBEL WALLS | INTUBATT / INTUMASTIC | /120/120 | 95MM X 45MM TIMBER | 35319300 | 45 |
| TIMBER JOIST | WALL | 110MM THICK WALL (MINIMUM) - GIB / MASONRY / HEBEL / 77MM THICK SPEEDWALL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | | 340885000.9 | V63 |
| STEEL BEAMS | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL WALLS | INTUMASTIC HP / PENOWRAP | /120/120 | 150 / 200 UB | 23671.4 | 47 |
| STEEL BEAMS | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL WALLS | INTUBATT / INTUMASTIC | /120/120 | U BEAMS | 23671.4 | 52 |
| STEEL BEAMS | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL WALLS | INTUBATT / INTUMASTIC | /180/180 | U BEAMS | 23671.4 | 52 |
| PURLINS | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL WALLS | INTUMASTIC HP / PENOWRAP | /120/120 | C PURLINS | 23671.4 | 49 |
| STEEL TILT SLAB PLATES | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL WALLS | INTUBATT / INTUMASTIC | /120/120 | 200X100 PLATE | 23671.4 | 51 |
| THREADED ROD | WALL | 100MM THICK CONCRETE / MASONRY / HEBEL WALLS | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | 12MM DIA | 340885000.9 | V65 |
| STEEL BEAMS / PURLINS | WALL/FLOOR | 100MM THICK GIB / MASONRY / CONCRETE WALL / FLOOR TO SUIT FRL | INTUBATT / INTUMASTIC / PENOWRAP | /180/180 | | 340885000.9 | V62 / V64 |
| ACCESS HATCH | WALL | 116MM THICK WALL - GIB / MASONRY / CONCRETE WALLS | RYANFIRE ACCESS HATCH | /90/0 | 300X300 | 46469500.2 | C |
| VENTILLATED ELECTRICAL DOWNLIGHTER COVER | CEILING | GIB - THICKNESS OF THE REQUIRED DRL | RYANFIRE DOWNLIGHTER COVER | /60/60 | 150 / 200 / 250 / 320 / 420 DIA DOWNLIGHTERS | 4863 | |
| THREADED ROD | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC | /120/0 | 12MM DIA ROD | 34088500.9 | H19 |
| THREADED ROD | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | 12MM DIA ROD | 34088500.9 | H46 |
| STEEL BEAMS / PURLINS | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /180/180 | | 34088500.9 | H43/ H45 |
| TIMBER JOIST | FLOOR | FLOOR THICKNESS OF THE REQUIRED FRL | INTUBATT / INTUMASTIC / PENOWRAP | /120/120 | | 34088500.9 | H44 |
| TIMBER JOIST | FLOOR | 150MM THICK CONCRETE FLOOR | INTUBATT / INTUMASTIC | /240/180 | 95X45MM TIMBER | 35319300 | 46 |

SNAP FIRE SYSTEMS

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The products listed in this register have all been tested to AS1530.4-2005 or Assessed to AS 4072.1-2005 as referenced within the New Zealand Building Code.

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---------------------|---|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| uPVC pipe only (or with fitting) | BEAM | Concrete Beam | SNAP H100S - Cast In collar - Stack | -/240/240 | 100mm | FSP1715 |
| uPVC pipe only (or with fitting) | BEAM | Concrete Beam | SNAP L100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FSP1715 |
| dBlue pipe | FLOOR | 150mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1648 |
| dBlue pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 50mm | FSP1648 |
| dBlue pipe | FLOOR | 150mm Concrete Slab | SNAP L80S - Cast In collar - Stack | -/240/240 | 75mm | FSP1648 |
| dBlue pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 110mm | FSP1648 |
| dBlue pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/120 | 160mm | FSP1648 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP 50R - Retrofit collar - Stack | -/240/240 | 40mm | FP4837 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/180/180 | 40mm | FCO2598 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1736 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H65S - Retrofit collar - Stack | -/240/240 | 40mm | FR5670 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP LP65R - Retrofit collar - Floorwaste & Shower | -/240/240 | 40mm | FSP1789 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FR5670 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 50mm | FSP1615 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Floorwaste & Shower | -/180/180 | 50mm | FSP1146 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 56mm | FSP1592 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 56mm | FP4640 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H65S - Retrofit collar - Stack | -/240/240 | 56mm | FSP1700 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 63mm | FAR3932 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H65S - Cast In collar - Stack | -/240/240 | 63mm | FSP1696 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 75mm | FAR3932 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 90mm | FAR3932 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP L100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FSP1592 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP 110R - Cast In collar - Stack | -/240/240 | 110mm | FP4837 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/180/180 | 110mm | FCO2598 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/180/180 | 110mm | FSP1134 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 110mm | FSP1577 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---------------------|--|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP HP100R - Cast In collar - Floorwaste & Shower | -/240/240 | 110mm | FP4640 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP LP100R-D - Cast In collar - Floorwaste & Shower | -/240/240 | 110mm | FSP1830 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/240 | 125mm | FR5670 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 125mm | FSP1615 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP HP150R - Cast In collar - Stack | -/240/240 | 125mm | FSP1615 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/180/180 | 160mm | FAR3528 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/180/180 | 160mm | FSP1132 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/180/120 | 160mm | FR5670 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP HP150R - Cast In collar - Stack | -/240/240 | 160mm | FSP1615 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP LP200R - Cast In collar - Stack | -/180/180 | 200mm | FSP1641 |
| HDPE pipe | FLOOR | 150mm Concrete Slab | SNAP HP250R-B - Cast In collar - Stack | -/180/180 | 250mm | FSP1692 |
| HDPE Silent pipe | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Floorwaste & Shower | -/180/180 | 50mm | FSP1146 |
| HDPE Silent pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 110mm | FAR3932 |
| HDPE Silent pipe | FLOOR | 150mm Concrete Slab | SNAP L100S - Cast In collar - Stack | -/240/240 | 110mm | FAR3932 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 16mm | FSP1339 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 20mm | FCO2718 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 25mm | FCO2718 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 32mm | FSP1339 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 32mm | FCO2718 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 32mm | FSP1340 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 40mm | FCO2718 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/0 | 40mm | FCO2718 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 50mm | FSP1339 |
| IPEX PE-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/0 | 50mm | FSP1340 |
| PE 11 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/180 | 110mm | FSP1367a |
| PE 11 pipe | FLOOR | 150mm Concrete Slab | SNAP 125C - Cast In collar - Stack | -/240/120 | 125mm | FSP1367a |
| PE 11 pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/120 | 160mm | FAR3528 |
| PE 11 pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/120 | 160mm | FSP1367a |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 20mm | FSP1367a |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 25mm | FAR3932 |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 32mm | FAR3932 |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 40mm | FAR3932 |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Retrofit collar - Stack | -/240/240 | 50mm | FSP1367a |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 50mm | FSP1367a |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/180 | 63mm | FAR3932 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---------------------|---|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/180 | 75mm | FAR3932 |
| PE 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/180 | 90mm | FAR3932 |
| PEX-A pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/180 | 16mm | FR5670 |
| PEX-A pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 16mm | FR5670 |
| PEX-A pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 20mm | FR5670 |
| PEX-A pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 20mm | FR5670 |
| PEX-A pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 25mm | FR5670 |
| PEX-A pipe | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Multiple Stack | -/240/240 | 3x20mm | FSP1849 |
| PEX-AL pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 16mm | FSP1758 |
| PEX-AL pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 20mm | FSP1758 |
| PEX-AL pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 26mm | FSP1758 |
| PEX-AL pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 32mm | FSP1758 |
| PEX-AL pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/120 | 40mm | FSP1758 |
| PEX-AL pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/180 | 50mm | FSP1771 |
| PEX-AL pipe | FLOOR | 150mm Concrete Slab | SNAP 63GAS - Retrofit collar - Stack | -/240/120 | 63mm | FSP1758 |
| PEX-B pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 16mm | FR5670 |
| PEX-B pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 16mm | FR5670 |
| PEX-B pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 20mm | FR5670 |
| PEX-B pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 20mm | FR5670 |
| PEX-B pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 25mm | FR5670 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 20mm | FSP1359 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 25mm | FAR3932 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 32mm | FAR3932 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 40mm | FAR3932 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Retrofit collar - Stack | -/240/180 | 50mm | FSP1359 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 50mm | FSP1359 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/180 | 63mm | FAR3932 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/180 | 75mm | FAR3932 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/180 | 90mm | FAR3932 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Stack | -/240/240 | 110mm | FSP1359 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP 125C - Cast In collar - Stack | -/240/180 | 125mm | FSP1359 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 160mm | FAR3528 |
| PPR 7.4 pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 160mm | FSP1359 |
| P-PVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 15mm | FSP1601 |
| P-PVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 32mm | FR5670 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---------------------|---|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| P-PVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 50mm | FSP1601 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 25mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 25mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 32mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP 50R - Retrofit collar - Stack | -/240/240 | 40mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 40mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP 50R - Retrofit collar - Stack | -/240/240 | 50mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Stack | -/240/240 | 50mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP 63R - Retrofit collar - Stack | -/240/240 | 63mm | FSP1657 |
| Progef pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Cast In collar - Stack | -/240/240 | 63mm | FSP1657 |
| Raupiano pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1564 |
| Raupiano pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FSP1564 |
| Raupiano pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FSP1564 |
| Raupiano pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 100mm | FSP1564 |
| Raupiano pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/240 | 150mm | FSP1592 |
| Raupiano pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 150mm | FR5670 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1614 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Stack | -/240/240 | 40mm | FSP1713 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 50mm | FSP1614 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FSP1713 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L80FWS - Cast In collar - Stack | -/240/240 | 75mm | FSP1614 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/240 | 100mm | FSP1614 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 110mm | FSP1741 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 110mm | FR5670 |
| Raupiano pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP100R-B - Cast In collar - Stack | -/240/240 | 110mm | FSP1713 |
| REHAU PX-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 32mm | FSP1339 |
| REHAU PX-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/180 | 40mm | FSP1340 |
| REHAU PX-AL-PE pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 40mm | FSP1340 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 16mm | FSP1339 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 20mm | FCO2719 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 25mm | FCO2719 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 32GAS - Retrofit collar - Stack | -/240/240 | 32mm | FSP1339 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 32mm | FSP1339 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 32mm | FSP1340 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 40mm | FCO2719 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---------------------|--|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/180 | 40mm | FCO2719 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/240 | 50mm | FCO2719 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 50GAS - Retrofit collar - Stack | -/240/180 | 50mm | FSP1340 |
| Rifeng PX-AL-PX pipe | FLOOR | 150mm Concrete Slab | SNAP 63GAS - Retrofit collar - Stack | -/240/240 | 63mm | FSP1340 |
| Triplus pipe | FLOOR | 150mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1652 |
| Triplus pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 50mm | FSP1652 |
| Triplus pipe | FLOOR | 150mm Concrete Slab | SNAP L80S - Cast In collar - Stack | -/240/240 | 75mm | FSP1652 |
| Triplus pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 110mm | FSP1652 |
| Triplus pipe | FLOOR | 150mm Concrete Slab | SNAP L100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 110mm | FSP1652 |
| Triplus pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 160mm | FSP1652 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 40mm | FSP1576 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/120 | 40mm | FR5670 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1575 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP 50R - Retrofit collar - Stack | -/240/240 | 50mm | FSP1686 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FP4640 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FSP1576 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FR5670 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 50mm | FSP1575 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FP4640 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP LP65R - Retrofit collar - Stack | -/180/180 | 50mm | FSP1641 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP 65-80R - Cast In collar - Stack | -/240/240 | 65mm | FP4837 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 65mm | FSP1577 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/60 | 65mm | FR5670 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP L65S - Cast In collar - Stack | -/240/240 | 65mm | FSP1575 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP 65-80R - Cast In collar - Stack | -/240/240 | 80mm | FP4837 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 80mm | FSP1576 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 80mm | FSP1575 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP LP100R-C - Cast In collar - Floorwaste & Shower | -/180/120 | 80mm | FR5670 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP LP100R-D - Cast In collar - Floorwaste & Shower | -/240/240 | 80mm | FSP1781 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP LP80R - Cast In collar - Floorwaste & Shower | -/240/240 | 80mm | FSP1592 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP 110R - Cast In collar - Stack | -/240/240 | 100mm | FP4640 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FSP1576 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FR5670 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 100mm | FP4837 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 100mm | FSP1575 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|---------------------|--|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FSP1592 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP L100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FP4837 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/180/180 | 150mm | FAR3528 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP HP150R - Cast In collar - Stack | -/240/240 | 150mm | FSP1601 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP 250C - Cast In collar - Stack | -/180/180 | 225mm | FSP1641 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP HP250R-B - Cast In collar - Stack | -/240/240 | 225mm | FSP1849 |
| uPVC pipe | FLOOR | 150mm Concrete Slab | SNAP 315C - Cast In collar - Stack | -/180/180 | 315mm | FSP1144 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP 50R - Retrofit collar - Stack | -/240/240 | 40mm | FP4837 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1577 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H65S - Retrofit collar - Stack | -/240/240 | 40mm | FSP1735 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Floorwaste & Shower | -/240/120 | 40mm | FR5670 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP65R - Retrofit collar - Floorwaste & Shower | -/180/180 | 40mm | FSP1641 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP 63R - Retrofit collar - Stack | -/240/240 | 50mm | FP4640 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FSP1564 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 50mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H65S - Retrofit collar - Stack | -/240/240 | 50mm | FSP1696 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 50mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP50R - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FSP1700 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 65mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H65S - Cast In collar - Stack | -/240/240 | 65mm | FSP1696 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L65S - Cast In collar - Stack | -/240/240 | 65mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP65R - Cast In collar - Floorwaste & Shower | -/240/240 | 65mm | FSP1789 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 80mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 80mm | FSP1830 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L80S - Cast In collar - Stack | -/240/240 | 80mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP100R-D - Cast In collar - Floorwaste & Shower | -/240/240 | 80mm | FSP1789 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 90mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L100S - Cast In collar - Stack | -/240/240 | 90mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP 110R - Cast In collar - Stack | -/240/240 | 100mm | FP4640 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FSP1577 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 100mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 100mm | FSP1577 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/240 | 100mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/240 | 100mm | FR5670 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP L100S - Cast In collar - Stack | -/240/240 | 100mm | FAR3932 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|-------------------------------|--|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP LP100R-b - Cast In collar - Floorwaste & Shower | -/240/180 | 100mm | FSP1713 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Floorwaste & Shower | -/240/240 | 150mm | FSP1700 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 150mm | FR5670 |
| uPVC pipe only (or with fitting) | FLOOR | 150mm Concrete Slab | SNAP HP150R - Cast In collar - Stack | -/240/240 | 150mm | FSP1615 |
| Wavin AS pipe | FLOOR | 150mm Concrete Slab | SNAP H65S - Retrofit collar - Stack | -/240/240 | 56mm | FSP1771 |
| Wavin AS pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 70mm | FSP1771 |
| Wavin AS pipe | FLOOR | 150mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 110mm | FSP1771 |
| HDPE pipe | FLOOR | 150mm Concrete Slab + Condeck | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 56mm | FSP1686 |
| uPVC pipe | FLOOR | 150mm Concrete Slab + Condeck | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FSP1686 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 40mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 40mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP H50S - Retrofit collar - Stack | -/240/240 | 50mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP L40/L50S - Retrofit collar - Stack | -/240/240 | 50mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 75mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP L80S - Cast In collar - Stack | -/240/240 | 75mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP H100S - Cast In collar - Stack | -/240/240 | 90mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP L100S - Cast In collar - Stack | -/240/240 | 90mm | FAR4019 |
| Raupiano pipe | FLOOR | 170mm Concrete Slab | SNAP L100S - Cast In collar - Stack | -/240/240 | 100mm | FAR4019 |
| uPVC pipe | FLOOR | 170mm Concrete Slab | SNAP LP100R - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FAR3722 |
| uPVC pipe | FLOOR | 170mm Concrete Slab | SNAP LP100R - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FP4428 |
| uPVC pipe only (or with fitting) | FLOOR | 170mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/240 | 150mm | FAR3528 |
| uPVC pipe only (or with fitting) | FLOOR | 170mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/240 | 150mm | FP4428 |
| PE 11 pipe | FLOOR | 175mm Concrete Slab | SNAP 125C - Cast In collar - Stack | -/240/240 | 125mm | FSP1367a |
| PE 11 pipe | FLOOR | 175mm Concrete Slab | SNAP H150S - Cast In collar - Stack | -/240/180 | 160mm | FSP1367a |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 50R - Retrofit collar - Stack | -/240/240 | 50mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 63R - Retrofit collar - Stack | -/240/240 | 50mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP LP50R - Retrofit collar - Stack | -/240/240 | 50mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 50R - Retrofit collar - Stack | -/240/240 | 56mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 63R - Retrofit collar - Stack | -/240/240 | 56mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 63R - Retrofit collar - Stack | -/240/240 | 63mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 65-80R - Retrofit collar - Stack | -/240/240 | 63mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 65-80R - Cast In collar - Stack | -/240/240 | 75mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 84R - Cast In collar - Stack | -/240/240 | 75mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP 110R - Cast In collar - Stack | -/240/240 | 90mm | FAR3933 |
| HDPE pipe | FLOOR | 180mm Concrete Slab | SNAP HP100R - Cast In collar - Stack | -/240/240 | 110mm | FAR3933 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|------------------------|--|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| HDPE Silent pipe | FLOOR | 180mm Concrete Slab | SNAP LP50R - Retrofit collar - Stack | -/240/240 | 50mm | FAR3933 |
| uPVC pipe | FLOOR | 180mm Concrete Slab | SNAP 63R - Cast In collar - Stack | -/240/240 | 65mm | FAR3933 |
| uPVC pipe | FLOOR | 180mm Concrete Slab | SNAP LP100R - Cast In collar - Stack | -/240/240 | 100mm | FAR3933 |
| uPVC pipe only (or with fitting) | FLOOR | 180mm Concrete Slab | SNAP LP50R - Retrofit collar - Stack | -/240/240 | 50mm | FAR3933 |
| uPVC pipe only (or with fitting) | FLOOR | 180mm Concrete Slab | SNAP 65-80R - Cast In collar - Stack | -/240/240 | 65mm | FAR3933 |
| uPVC pipe only (or with fitting) | FLOOR | 180mm Concrete Slab | SNAP 65-80R - Cast In collar - Stack | -/240/240 | 80mm | FAR3933 |
| uPVC pipe only (or with fitting) | FLOOR | 180mm Concrete Slab | SNAP 110R - Cast In collar - Stack | -/240/240 | 90mm | FAR3933 |
| uPVC pipe only (or with fitting) | FLOOR | 180mm Concrete Slab | SNAP HP150R - Cast In collar - Floorwaste & Shower | -/240/180 | 150mm | FSP1781 |
| HDPE pipe | FLOOR | 185mm Concrete Slab | SNAP H50FWS - Retrofit collar - Floorwaste & Shower | -/180/180 | 50mm | FAR3932 |
| HDPE pipe | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 63mm | FAR3932 |
| HDPE pipe | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 75mm | FAR3932 |
| HDPE pipe | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 90mm | FAR3932 |
| HDPE Silent pipe | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 110mm | FAR3932 |
| HDPE Silent pipe | FLOOR | 185mm Concrete Slab | SNAP L100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 110mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP L100FWS - Retrofit collar - Floorwaste & Shower | -/240/240 | 50mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 65mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP L65FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 65mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 80mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP L80FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 80mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP H100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP H150S - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FAR3932 |
| uPVC pipe only (or with fitting) | FLOOR | 185mm Concrete Slab | SNAP L100FWS - Cast In collar - Floorwaste & Shower | -/240/240 | 100mm | FAR3932 |
| uPVC pipe | FLOOR | 250mm Concrete Slab | SNAP 315C - Cast In collar - Stack | -/180/180 | 315mm | FCO2601 |
| HDPE pipe | WALL | 150mm Hebel block wall | SNAP HP100R - Cast In collar - Stack | -/240/240 | 110mm | FSP1659 |
| HDPE pipe | WALL | 150mm Hebel block wall | SNAP HP150R - Cast In collar | -/180/180 | 160mm | FSP1668 |
| uPVC pipe | WALL | 150mm Hebel block wall | SNAP LP50R - Retrofit collar - Stack | -/240/240 | 50mm | FSP1659 |
| uPVC pipe | WALL | 150mm Hebel block wall | SNAP HP100R - Cast In collar - Stack | -/240/240 | 100mm | FSP1659 |
| uPVC pipe | WALL | 150mm Hebel block wall | SNAP HP150R - Cast In collar - Stack | -/240/180 | 150mm | FSP1659 |
| uPVC pipe | WALL | 150mm Hebel block wall | SNAP HP250R-B - Cast In collar | -/180/180 | 250mm | FSP1668 |
| CXL PX-AL-PX pipe | WALL | 75mm Hebel Powerpanel | SNAP 32GAS - Retrofit collar | -/120/120 | 16mm | FSP1783 |
| CXL PX-AL-PX pipe | WALL | 75mm Hebel Powerpanel | SNAP 32GAS - Retrofit collar | -/120/120 | 20mm | FSP1822 |
| CXL PX-AL-PX pipe | WALL | 75mm Hebel Powerpanel | SNAP 32GAS - Retrofit collar | -/120/120 | 25mm | FSP1822 |
| CXL PX-AL-PX pipe | WALL | 75mm Hebel Powerpanel | SNAP 32GAS - Retrofit collar | -/120/120 | 32mm | FSP1822 |
| CXL PX-AL-PX pipe only (or with fitting) | WALL | 75mm Hebel Powerpanel | SNAP 50GAS - Retrofit collar | -/120/60 | 50mm | FSP1807 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|-----------------------------------|--------------------------------|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| HDPE pipe | WALL | 75mm Hebel Powerpanel | SNAP LP65R - Retrofit collar | -/120/90 | 40mm | FSP1783 |
| HDPE pipe | WALL | 75mm Hebel Powerpanel | SNAP LP65R - Cast In collar | -/120/90 | 63mm | FSP1807 |
| HDPE pipe | WALL | 75mm Hebel Powerpanel | SNAP LP100R-D - Cast In collar | -/120/120 | 75mm | FSP1807 |
| HDPE pipe | WALL | 75mm Hebel Powerpanel | SNAP LP100R-D - Cast In collar | -/120/120 | 110mm | FSP1783 |
| HDPE pipe | WALL | 75mm Hebel Powerpanel | SNAP HP150R - Cast In collar | -/120/120 | 160mm | FSP1822 |
| PEX-B pipe | WALL | 75mm Hebel Powerpanel | SNAP 32R - Retrofit collar | -/120/120 | 16mm | FSP1783 |
| PEX-B pipe | WALL | 75mm Hebel Powerpanel | SNAP 32R - Retrofit collar | -/120/120 | 20mm | FSP1807 |
| PEX-B pipe | WALL | 75mm Hebel Powerpanel | SNAP 32R - Retrofit collar | -/120/120 | 32mm | FSP1807 |
| Raupiano pipe | WALL | 75mm Hebel Powerpanel | SNAP LP65R - Retrofit collar | -/120/120 | 50mm | FSP1822 |
| Raupiano pipe | WALL | 75mm Hebel Powerpanel | SNAP LP100R-D - Cast In collar | -/120/120 | 110mm | FSP1822 |
| uPVC pipe only (or with fitting) | WALL | 75mm Hebel Powerpanel | SNAP LP65R - Retrofit collar | -/120/120 | 40mm | FSP1783 |
| uPVC pipe only (or with fitting) | WALL | 75mm Hebel Powerpanel | SNAP LP65R - Retrofit collar | -/120/120 | 50mm | FSP1783 |
| uPVC pipe only (or with fitting) | WALL | 75mm Hebel Powerpanel | SNAP LP65R - Cast In collar | -/120/90 | 65mm | FSP1783 |
| uPVC pipe only (or with fitting) | WALL | 75mm Hebel Powerpanel | SNAP LP100R-D - Cast In collar | -/120/90 | 80mm | FSP1807 |
| uPVC pipe only (or with fitting) | WALL | 75mm Hebel Powerpanel | SNAP LP100R-D - Cast In collar | -/120/90 | 100mm | FSP1783 |
| uPVC pipe only (or with fitting) | WALL | 75mm Hebel Powerpanel | SNAP HP150R - Cast In collar | -/120/120 | 150mm | FSP1807 |
| HDPE pipe | WALL | 78mm Speedpanel | SNAP LP50R - Retrofit collar | -/90/90 | 50mm | FSV1731 |
| HDPE pipe | WALL | 78mm Speedpanel | SNAP LP100R-C - Cast In collar | -/60/60 | 110mm | FSV1731 |
| uPVC pipe | WALL | 78mm Speedpanel | SNAP LP50R - Retrofit collar | -/120/120 | 40mm | FSV1731 |
| uPVC pipe | WALL | 78mm Speedpanel | SNAP LP50R - Retrofit collar | -/120/120 | 50mm | FSV1731 |
| uPVC pipe | WALL | 78mm Speedpanel | SNAP LP100R-C - Cast In collar | -/90/90 | 65mm | FSV1731 |
| uPVC pipe | WALL | 78mm Speedpanel | SNAP LP100R-C - Cast In collar | -/120/90 | 80mm | FSV1731 |
| uPVC pipe | WALL | 78mm Speedpanel | SNAP 110R - Cast In collar | -/120/90 | 100mm | FSV1731 |
| uPVC pipe | WALL | 78mm Speedpanel | SNAP LP100R-C - Cast In collar | -/60/60 | 100mm | FSV1731 |
| uPVC pipe | WALL | 78mm Speedpanel | SNAP HP150R - Cast In collar | -/120/90 | 150mm | FSV1731 |
| HDPE pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 50R - Retrofit collar | -/90/60 | 40mm | FP5663 |
| HDPE pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 110R - Cast In collar | -/90/60 | 110mm | FP5663 |
| PEX-A pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/90 | 16mm | FSP1723 |
| PEX-A pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/90 | 20mm | FSP1723 |
| PEX-A pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/60 | 25mm | FSP1723 |
| PEX-A pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/60 | 32mm | FSP1723 |
| PEX-B pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/60 | 16mm | FSP1723 |
| PEX-B pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/60 | 20mm | FSP1723 |
| PEX-B pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/60 | 25mm | FSP1723 |
| PEX-B pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/60 | 32mm | FSP1723 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|-----------------------------------|------------------------------|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| P-PVC pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/120/60 | 15mm | FSP1723 |
| P-PVC pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/90/60 | 25mm | FP5663 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/90/60 | 20mm | FP5663 |
| uPVC pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 50R - Retrofit collar | -/90/60 | 40mm | FP5663 |
| uPVC pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 50R - Retrofit collar | -/90/60 | 50mm | FP5663 |
| uPVC pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 63R - Cast In collar | -/90/60 | 65mm | FP5663 |
| uPVC pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 65-80R - Cast In collar | -/90/60 | 80mm | FP5663 |
| uPVC pipe | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 110R - Cast In collar | -/90/60 | 100mm | FP5663 |
| C-PVC pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 50R - Retrofit collar | -/120/120 | 1.25 inch | FSP1748 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 15mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/180/120 | 15mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/120 | 20mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/180/90 | 20mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/120 | 26mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/120 | 32mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/120 | 40mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/90 | 50mm | FSP1759 |
| PEX-AL pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 63GAS - Retrofit collar | -/180/60 | 63mm | FSP1759 |
| P-PVC pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/120/120 | 15mm | FSP1748 |
| P-PVC pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 50R - Retrofit collar | -/120/120 | 32mm | FSP1748 |
| PVC Flexi pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/120/120 | 16mm | FSP1748 |
| uPVC pipe | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 110R - Cast In collar | -/120/120 | 100mm | FSP1748 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 40mm | FP4874 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/120 | 50mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/120 | 50mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/120 | 56mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/120 | 56mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/120 | 63mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 65-80R - Cast In collar | -/180/120 | 75mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 84R - Cast In collar | -/180/120 | 75mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 65-80R - Cast In collar | -/180/120 | 90mm | FAR3929 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 110R - Cast In collar | -/180/120 | 110mm | FP4874 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP HP150R - Cast In collar | -/120/120 | 160mm | FSP1716 |
| IPLX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 16mm | FSP1341 |
| IPLX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 20mm | FCO2718 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|----------------------------------|------------------------------|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 110R - Cast In collar | -/180/120 | 110mm | FP4874 |
| HDPE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP HP150R - Cast In collar | -/120/120 | 160mm | FSP1716 |
| IPEX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 16mm | FSP1341 |
| IPEX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 20mm | FCO2718 |
| IPEX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 25mm | FCO2718 |
| IPEX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/120 | 32mm | FSP1341 |
| IPEX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/120 | 32mm | FCO2718 |
| IPEX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/120 | 40mm | FCO2718 |
| IPEX PE-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/120 | 50mm | FSP1341 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 20mm | FSP1366 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 20mm | FSP1366 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 20mm | FSP1366 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 25mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 25mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 25mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 32mm | FSP1366 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 32mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 32mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 40mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 40mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 50mm | FSP1366 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 50mm | FAR3929 |
| PE 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 63mm | FSP1366 |
| PEX-A pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/120 | 16mm | FSP1634 |
| PEX-A pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 20mm | FSP1634 |
| PEX-A pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 25mm | FSP1634 |
| PEX-A pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/90 | 25mm | FSP1634 |
| PEX-A pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 32mm | FSP1716 |
| PEX-A pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/90 | 32mm | FSP1634 |
| PEX-B pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 16mm | FSP1634 |
| PEX-B pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 20mm | FSP1634 |
| PEX-B pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/120 | 25mm | FSP1634 |
| PEX-B pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/120 | 32mm | FSP1634 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 20mm | FSP1360 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 20mm | FSP1360 |

Section A – Fire Stopping Products/Solutions

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|----------------------------------|------------------------------|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 20mm | FSP1360 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 25mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 25mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 25mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 32mm | FSP1360 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 32mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 32mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 40mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 40mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 50mm | FSP1360 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 50mm | FAR3929 |
| PPR 7.4 pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 63mm | FSP1360 |
| Progef pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 20mm | FSP1658 |
| Progef pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 25mm | FSP1658 |
| Progef pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 32mm | FSP1658 |
| Progef pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32R - Retrofit collar | -/180/180 | 40mm | FSP1658 |
| Progef pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 50mm | FSP1658 |
| Progef pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/180 | 63mm | FSP1658 |
| Raupiano pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 40mm | FSP1716 |
| Raupiano pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 110R - Cast In collar | -/180/180 | 110mm | FSP1716 |
| REHAU PX-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 16mm | FSP1341 |
| REHAU PX-AL-PE pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/180 | 40mm | FSP1341 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 16mm | FCO2719 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 20mm | FCO2719 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 25mm | FCO2719 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 32GAS - Retrofit collar | -/180/180 | 32mm | FCO2719 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/180 | 32mm | FSP1341 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/120 | 40mm | FCO2719 |
| Rifeng PX-AL-PX pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50GAS - Retrofit collar | -/180/120 | 50mm | FCO2719 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/120 | 40mm | FAR3929 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/120 | 40mm | FP4874 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/120 | 50mm | FAR3929 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/120 | 50mm | FAR3929 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Retrofit collar | -/180/120 | 50mm | FP4874 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 63R - Cast In collar | -/180/120 | 65mm | FAR3929 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Specimen Size | Report Ref. |
|--|-------------|-----------------------------------|------------------------------------|-----------|---------------|-------------|
| NON-INSULATED COMBUSTIBLE PIPES | | | | | | |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 84R - Cast In collar | -/180/120 | 65mm | FP4874 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 65-80R - Cast In collar | -/180/120 | 80mm | FP4874 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 84R - Cast In collar | -/180/120 | 80mm | FAR3929 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 65-80R - Cast In collar | -/180/120 | 90mm | FAR3929 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 110R - Cast In collar | -/180/180 | 100mm | FP4874 |
| uPVC pipe | WALL | Steel Frame, 2x16mm Plasterboard | SNAP HP150R - Cast In collar | -/120/120 | 150mm | FSP1716 |
| uPVC pipe only (or with fitting) | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 50R - Retrofit collar | -/180/180 | 40mm | FP4874 |
| uPVC pipe only (or with fitting) | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 65-80R - Cast In collar | -/180/120 | 65mm | FAR3929 |
| uPVC pipe only (or with fitting) | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 84R - Cast In collar | -/180/120 | 65mm | FAR3929 |
| uPVC pipe only (or with fitting) | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 65-80R - Cast In collar | -/180/120 | 80mm | FAR3929 |
| uPVC pipe only (or with fitting) | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 110R - Cast In collar | -/180/120 | 90mm | FAR3929 |
| uPVC pipe only (or with fitting) | WALL | Steel Frame, 2x16mm Plasterboard | SNAP 110R - Cast In collar | -/180/120 | 100mm | FP4874 |
| ELECTRICAL PENETRATION SERVICES | | | | | | |
| PVC Conduit | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 20mm | FSP1781 |
| PVC Conduit | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 20mm | FSP1781 |
| PVC Conduit | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 25mm | FSP1781 |
| PVC Conduit | FLOOR | 150mm Concrete Slab | SNAP 32R - Retrofit collar - Stack | -/240/240 | 25mm | FSP1781 |
| PVC Conduit | WALL | 75mm Hebel Powerpanel | SNAP 32R - Retrofit collar | -/120/120 | 20mm | FSP1783 |
| PVC Conduit | WALL | 75mm Hebel Powerpanel | SNAP 32R - Retrofit collar | -/120/120 | 25mm | FSP1807 |
| PVC Conduit | WALL | Steel Frame, 1 x16mm Plasterboard | SNAP 32R - Retrofit collar | -/90/60 | 25mm | FP5663 |
| PVC Conduit | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/120/120 | 20mm | FSP1748 |
| PVC Conduit | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/120/120 | 20mm | FSP1748 |
| PVC Conduit | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/120/120 | 25mm | FSP1748 |
| PVC Conduit | WALL | Steel Frame, 2x13mm Plasterboard | SNAP 32R - Retrofit collar | -/120/120 | 25mm | FSP1748 |

Section B: Non-FPA Members



Section B: Fire Stopping Products/Solutions Non-FPA Member Companies

› LORIENT PTY LTD

Intumescent Fire Dampers..... 184-189

Fire Resistant Glazing Systems 189-190

LORIENT PTY LTD

Manufacturer Code: LT

Unit 30, 9 Powells Road
Brookvale, Sydney
NSW 2100, AustraliaPh: +61 2 9905 0868
Email: sales@lorientau.com.au
Website: www.lorient.com.au

The products listed in this register have all been tested to AS1530.4-2005 or Assessed to AS 4072.1-2005 as referenced within the New Zealand Building Code.

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. | ID Ref. |
|---------------------------------|-----------------|---|--|----------------------------------|----------------|-----------------------|---------|
| INTUMESCENT FIRE DAMPERS | | | | | | | |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete wall 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct - angles fitted to both sides | -/120/60 | 1200 x 2400mm | CSIRO FCO 3127 | Wall 1 |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete wall 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct - angles fitted to one side | -/120/60 | 1200 x 2400mm | CSIRO FCO 3127 | Wall 2 |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete wall 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to grille | -/120/60 | 1200 x 2400mm | CSIRO FCO 3127 | Wall 3 |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete wall 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct - fitted tight to slab | -/120/60 | 1200 x 2400mm | CSIRO FCO 3127 | Wall 4 |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete wall 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct - fitted tight to wall | -/120/60 | 1200 x 2400mm | CSIRO FCO 3127 | Wall 5 |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete wall (min 90mm thick) for 60min , 90min or 120min performance | Lorient LVH44C Circular intumescent fire damper - Duct to duct angles fitted to one side | -/60/60 -/90/60 -/120/60 | Ø100 to Ø450 | EXOVA EWFA 33233400.6 | Wall 6 |
| Sheet metal duct | Vertical (Wall) | CSR Hebel wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct angles fitted to one side | -/60/60 -/90/60 -/120/60 | 450 x 450mm | EXOVA EWFA 33233400.6 | Wall 7 |
| Sheet metal duct | Vertical (Wall) | CSR Hebel wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct - angles fitted one side | -/60/60 -/90/60 -/120/60 | 450 x 450mm | EXOVA EWFA 33233400.6 | Wall 8 |
| Sheet metal duct | Vertical (Wall) | CSR Hebel wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44C Circular intumescent fire damper CSR Hebel + cavity stud wall) 60min , 90min or 2hr performance | -/60/60 -/90/60 -/120/60 - | "Ø100 to Ø450" | EXOVA EWFA 33233400.6 | Wall 9 |
| Sheet metal duct | Vertical (Wall) | CSR Hebel + cavity stud wall) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct - angles fitted one side | -/60/60 -/90/60 -/120/60 | 450 x 450mm | EXOVA EWFA 33233400.6 | Wall 10 |
| Sheet metal duct | Vertical (Wall) | CSR Hebel + cavity stud wall) 60min , 90min or 2hr performance | Lorient LVH44C Circular intumescent fire damper - Duct to duct - angles fitted one side | -/60/60 -/90/60 -/120/60 | Ø100 to Ø450 | EXOVA EWFA 33233400.6 | Wall 11 |
| Sheet metal duct | Vertical (Wall) | CSR Hebel wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to duct - fitted tight to slab | Up to -/120/60 | 450 x 450mm | EXOVA EWFA 33233400.6 | Wall 12 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. | ID Ref. |
|---------------------------------|-----------------|---|---|----------------------------------|--------------------------------|-----------------------|--------------|
| INTUMESCENT FIRE DAMPERS | | | | | | | |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed Single layer 13mm fire rated plasterboard Wall - 1hr | Lorient LVH44C Circular intumescent fire damper - Duct to duct fixing angles one side | -/60/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Studwall 1 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed Single layer 13mm fire rated plasterboard Wall - 1hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/60/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 2 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed Single layer 16mm fire rated plasterboard Wall - 90min | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/90/60 | 450 x 450mm | EXOVA EWFA 33233400.6 | Studwall 3 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed Single layer 16mm fire rated plasterboard Wall - 90min | Lorient LVH44C Circular intumescent fire damper - Duct to duct fixing angles one side | -/90/60 | Ø100 to Ø450 | EXOVA EWFA 33233400.6 | Studwall 4 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed double layer 13mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 5 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed double layer 13mm fire rated plasterboard Wall - 2hr | Lorient LVH44C Circular intumescent fire damper - Duct to duct fixing angles one side | -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Studwall 6 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed double layer 16mm fire rated plasterboard Wall - 2hr | Lorient LVH44C Circular intumescent fire damper - Duct to duct fixing angles one side | -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Studwall 7 |
| Sheet metal duct | Vertical (Wall) | Lightweight Timber Framed Single layer 13mm fire rated plasterboard Wall - 1hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/60/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 14 |
| Sheet metal duct | Vertical (Wall) | Lightweight Timber Framed Single layer 13mm fire rated plasterboard Wall - 1hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/60/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 15 |
| Sheet metal duct | Vertical (Wall) | Lightweight Timber Framed 2 x layer 13mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 16 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed Single layer 13mm fire rated plasterboard Wall - 1hr | Lorient LVH44 Intumescent fire damper - Duct to duct Tight to slab | -/60/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 18 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed Single layer 16mm fire rated plasterboard Wall - 90min | Lorient LVH44 Intumescent fire damper - Duct to duct Tight to slab | -/90/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 19 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed 2 x layer 13mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to duct Tight to slab | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Studwall 20 |
| Sheet metal duct | Vertical (Wall) | Lightweight 25mm shaftwall liner with 16mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/120/- | 600 x 600mm | CSIRO FCO 3149 | Shaftwall 1 |
| Sheet metal duct | Vertical (Wall) | Lightweight 25mm shaftwall liner with 2 x 16mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/120/- | 600 x 600mm | CSIRO FCO 3149 | Shaftwall 2 |
| Sheet metal duct | Vertical (Wall) | Lightweight 25mm shaftwall liner with 2 x 13mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/120/- | 600 x 600mm | CSIRO FCO 3149 | Shaftwall 3 |
| Sheet metal duct | Vertical (Wall) | 3 x 13mm or 3 x 16mm Fire rated plasterboard laminated shaftwall | Lorient LVH44C Circular intumescent fire damper - Duct to duct fixing angles one side | -/120/- | Ø100 to Ø450 | Exova EWFA 33233400.6 | Shaftwall 4 |
| Sheet metal duct | Vertical (Wall) | 3 x 13mm or 3 x 16mm Fire rated plasterboard laminated shaftwall | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/120/- | 450 x 450mm | Exova EWFA 33233400.6 | Shaftwall 5 |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete shaft wall up to 2hr performance | Lorient LVH44 or LVH44C Intumescent fire damper - Duct to riser - angle free | -/60/60 -/90/60 -/120/60 - | 450 x 450mm or Ø100 to Ø450 | Exova EWFA 33233400.6 | Angle free 1 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. | ID Ref. |
|---------------------------------|-----------------|---|---|----------------------------------|-----------------------------|-----------------------|---------------|
| INTUMESCENT FIRE DAMPERS | | | | | | | |
| Sheet metal duct | Vertical (Wall) | CSR Hebel shaft wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 or LVH44C Intumescent fire damper - Duct to riser - angle free | -/60/60 -/90/60 -/120/60 - | 450 x 450mm or Ø100 to Ø450 | Exova EWFA 33233400.6 | Angle free 2 |
| Sheet metal duct | Vertical (Wall) | Lightweight Timber Framed Single layer 13mm fire rated plasterboard Wall - 1hr | Lorient LVH44 or LVH44C Intumescent fire damper - Duct to riser - angle free | -/60/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 3 |
| Sheet metal duct | Vertical (Wall) | Lightweight Timber Framed Single layer 16mm fire rated plasterboard Wall - 90 min | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free | -/90/60 -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 4 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed double layer 13mm or 16mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 5 |
| Sheet metal duct | Vertical (Wall) | 3 x 13mm or 3 x 16mm Fire rated plasterboard laminated shaftwall | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free | -/120/- | 450 x 450mm or Ø100 to Ø450 | Exova EWFA 33233400.6 | Angle free 6 |
| Sheet metal duct | Vertical (Wall) | Lightweight 25mm shaftwall liner with 2 x 13mm or 2 x 16mm fire rated plasterboard Wall - 2hr | Lorient LVH44 or LVH44C Intumescent fire damper - Duct to riser - angle free | -/90/60 -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 7 |
| Sheet metal duct | Vertical (Wall) | Masonry or Concrete shaft wall up to 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free tight to slab | -/60/60 -/90/60 -/120/60 - | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 8 |
| Sheet metal duct | Vertical (Wall) | CSR Hebel shaft wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free tight to slab | -/60/60 -/90/60 -/120/60 - | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 9 |
| Sheet metal duct | Vertical (Wall) | Lightweight Timber Framed Single layer 13mm fire rated plasterboard Wall - 1hr | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free tight to slab | -/60/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 10 |
| Sheet metal duct | Vertical (Wall) | Lightweight Timber Framed Single layer 16mm fire rated plasterboard Wall - 90 min | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free tight to slab | -/90/60 -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 11 |
| Sheet metal duct | Vertical (Wall) | Lightweight Steel Framed double layer 13mm or 16mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free tight to slab | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 12 |
| Sheet metal duct | Vertical (Wall) | Lightweight 25mm shaftwall liner with 2 x 13mm or 2 x 16mm fire rated plasterboard Wall - 2hr | Lorient LVH44 Intumescent fire damper - Duct to riser - angle free tight to slab | -/90/60 -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Angle free 13 |
| Sheet metal duct | Vertical (Wall) | 51mm or 64mm or 78mm Speedpanel wall | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/120/- | 1000 x 1000mm | Exova EWFA RIR 21622 | Speedpanel 1 |
| Sheet metal duct | Vertical (Wall) | 51mm or 64mm or 78mm Speedpanel wall | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/60/60 -/90/60 -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Speedpanel 2 |
| Sheet metal duct | Vertical (Wall) | 51mm or 64mm or 78mm Speedpanel wall | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/60/60 -/90/60 -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Speedpanel 3 |
| Sheet metal duct | Vertical (Wall) | 51mm or 64mm or 78mm Speedpanel wall | Lorient LVH44C Circular intumescent fire damper - Duct to duct fixing angles one side | -/60/60 -/90/60 -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Speedpanel 4 |
| Protecting open aperture | Vertical (Wall) | 78mm Speedpanel wall | Lorient LVH44 intumescent air transfer grille- wall mounted brackets fixed one side | -/120/30 | 450 x 450mm | Exova EWFA 33090200 | Speedpanel 5 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. | ID Ref. |
|---------------------------------|-----------------|---|---|--------------------------------|----------------------|-----------------------|---------------|
| INTUMESCENT FIRE DAMPERS | | | | | | | |
| Sheet metal duct | Vertical (Wall) | Prontopanel wall 60m thick | Lorient LVH44 Intumescent fire damper- Duct to duct fixing angles both sides | -/60/60 | 450 x 450mm | Exova EWFA 33233400.6 | Prontopanel 1 |
| Sheet metal duct | Vertical (Wall) | Prontopanel wall 60m thick | Lorient LVH44C Circular Intumescent fire damper - Duct to duct fixing angles one side | -/60/60 -/90/60 -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Prontopanel 2 |
| Sheet metal duct | Vertical (Wall) | Prontopane cavity wall with 13mm fire rated plasterboard | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Prontopanel 3 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44C Circular intumescent fire damper -Duct to duct fixing angles one side | -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Prontopanel 4 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Prontopanel 5 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44C Circular intumescent fire damper - Duct to duct fixing angles one side | -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Prontopanel 6 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44 Intumescent fire damper - Duct to riser | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Prontopanel 7 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44 Intumescent fire damper Duct to riser - tight to slab | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Prontopanel 8 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44C Circular intumescent fire damper - Duct to riser | -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Prontopanel 9 |
| Sheet metal duct | Vertical (Wall) | Xlam CLT timber walls 60min to 120min performance | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/60/60 -/90/60 -/120/60 | not to exceed 0.2sqm | Exova EWFA 33233400.6 | Xlam 1 |
| Sheet metal duct | Vertical (Wall) | Xlam CLT timber walls 60min to 120min performance | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/60/60 -/90/60 -/120/60 | not to exceed 0.2sqm | Exova EWFA 33233400.6 | Xlam 2 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44 Intumescent fire damper - Duct to riser | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Prontopanel 7 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44 Intumescent fire damper Duct to riser - tight to slab | -/120/60 | 450 x 450mm | Exova EWFA 33233400.6 | Prontopanel 8 |
| Sheet metal duct | Vertical (Wall) | Prontopanel cavity wall with 13mm fire rated plasterboard | Lorient LVH44C Circular intumescent fire damper - Duct to riser | -/120/60 | Ø100 to Ø450 | Exova EWFA 33233400.6 | Prontopanel 9 |
| Sheet metal duct | Vertical (Wall) | Xlam CLT timber walls 60min to 120min performance | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles both sides | -/60/60 -/90/60 -/120/60 | not to exceed 0.2sqm | Exova EWFA 33233400.6 | Xlam 1 |
| Sheet metal duct | Vertical (Wall) | Xlam CLT timber walls 60min to 120min performance | Lorient LVH44 Intumescent fire damper - Duct to duct fixing angles one side | -/60/60 -/90/60 -/120/60 | not to exceed 0.2sqm | Exova EWFA 33233400.6 | Xlam 2 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. | ID Ref. |
|---------------------------------|-----------------|--|---|-----------------------|--------------|--|----------------|
| INTUMESCENT FIRE DAMPERS | | | | | | | |
| Protecting open aperture | Vertical (Wall) | Intubatt bulkhead overlapping masonry or concrete wall 2 hr | Lorient LVH44 Intumescent fire damper Installed in TBA Firefly Intubatt board | -/120/- | 450 x 450mm | Exova EWFA RIR3488500 | TBA Intubatt 1 |
| Protecting open aperture | Vertical (Wall) | Intubatt bulkhead installed in lightweight steel frame fire rated plasterboard wall 2 hr | Lorient LVH44 Intumescent fire damper- Installed in TBA Firefly Intubatt board | -/120/- | 450 x 450mm | Exova EWFA RIR3488500 | TBA Intubatt 2 |
| Protecting open aperture | Vertical (Wall) | Intubatt bulkhead overlapping lightweight steel frame fire rated plasterboard wall 2 hr | Lorient LVH44 Intumescent fire damper - Installed in TBA Firefly Intubatt board | -/120/- | 450 x 450mm | Exova EWFA RIR3488500 | TBA Intubatt 3 |
| Protecting open aperture | Vertical (Wall) | Intubatt bulkhead installed in lightweight steel frame fire rated plasterboard wall 2 hr | Lorient LVH44 Intumescent fire damper- Installed in TBA Firefly Intubatt board | -/120/- | 450 x 450mm | Exova EWFA RIR3488500 | TBA Intubatt 4 |
| Protecting open aperture | Vertical (Wall) | Intubatt bulkhead overlapping 51, 68, or 78mm Speedpanel wall up to 2 hr | Lorient LVH44 Intumescent fire damper - Installed in TBA Firefly Intubatt board | -/120/- | 450 x 450mm | Exova EWFA RIR3488500 | TBA Intubatt 5 |
| Protecting open aperture | Vertical (Wall) | Promat Promasil 1100 board | Lorient LVH44 Intumescent fire damper Installed in Promasil 1100 board | -/120/- | 800 x 800mm | Branz FAR 3404 & FAR 4810 | Promat 1 |
| Protecting open aperture | Vertical (Wall) | Promat Promasil 1100 board | Lorient LVH44 Intumescent fire damper - surface mounted to Promasil 1100 board | -/120/- | 800 x 800mm | Branz FAR 3404 & FAR 4810 | Promat 2 |
| Protecting aperture in ceiling | Ceiling | 2 x 16mm fire rated plasterboard ceiling | Lorient CE-1 intumescent fire damper - Mounted in ceiling | -/60/60 RISF 60min | 0.25 sqm | Branz FAR 4581 | Ceiling 1 |
| Protecting aperture in ceiling | Ceiling | 2 x 16mm fire rated plasterboard ceiling | Lorient CE-2 intumescent fire damper - Mounted in ceiling void | -/60/60 RISF 60min | 0.20 sqm | Branz FAR 4581 | Ceiling 2 |
| Protecting aperture in ceiling | Ceiling | 2 x 16mm fire rated plasterboard ceiling | Lorient CE-3 intumescent fire damper - Mounted in ceiling | -/90/90 RISF 60min | Ø150 | Branz FAR 5859 | Ceiling 3 |
| Protecting open aperture | Vertical (Wall) | Masonry or Concrete wall 4hr performance | Lorient LVH44 Intumescent air transfer grille - mounted in wall with mesh guard | -/240/120 | 2400 x1200mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 1 |
| Protecting open aperture | Vertical (Wall) | CSR Hebel wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent air transfer grille - mounted in wall with mesh guard | -/120/120 | 2400 x1200mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 2 |
| Protecting open aperture | Vertical (Wall) | Prontopanel wall 60m thick | Lorient LVH44 Intumescent air transfer grille - mounted in wall with mesh guard | -/120/120 | 2400 x1200mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 3 |
| Protecting open aperture | Vertical (Wall) | Masonry or Concrete wall 4hr performance | Lorient LVH44 Intumescent air transfer grille - mounted in wall - no guard | -/120/- | 2400 x1200mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 4 |
| Protecting open aperture | Vertical (Wall) | CSR Hebel wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent air transfer grille - mounted in wall - no guard | -/120/- | 2400 x1200mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 5 |
| Protecting open aperture | Vertical (Wall) | 51mm, 64mm 78mm Speedpanel | Lorient LVH44 Intumescent air transfer grille - mounted in wall - no guard | -/120/- | 2400 x1200mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 6 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. | ID Ref. |
|---------------------------------|-----------------|--|---|---------------------------------|--|---|-------------|
| INTUMESCENT FIRE DAMPERS | | | | | | | |
| Protecting open aperture | Vertical (Wall) | Prontopanel wall | Lorient LVH44 Intumescent air transfer grille - mounted in wall - no guard | -/120/- | 2400 x1200mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 7 |
| Protecting open aperture | Vertical (Wall) | Masonry or Concrete wall 4hr performance | Lorient LVH44 Intumescent air transfer grille - Surface mounted over aperture with mesh to one side | -/240/120 one way FRL | Max aperture size 1000 x 500mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 8 |
| Protecting open aperture | Vertical (Wall) | CSR Hebel wall (min 75mm thick) 60min , 90min or 2hr performance | Lorient LVH44 Intumescent air transfer grille - Surface mounted over aperture with mesh to one side | -/240/120 one way FRL | Max aperture size 1000 x 500mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 9 |
| Protecting open aperture | Vertical (Wall) | Prontopanel wall | Lorient LVH44 Intumescent air transfer grille - Surface mounted over aperture with mesh to one side | -/240/120 one way FRL | Max aperture size 1000 x 500mm | Exova EWFA 48623700.2 Exova EWFA55205900 | FR - ATG 10 |
| Protecting aperture in door | Fire doors | E-CORE Maxi & Mini fire door assemblies up to 4hr | Lorient LVH-D fire door ventilation grille | -/60/30 -/120/30 -/240/30 | 600 x 300mm 450 x 450mm 300 x 300mm | Branz FAR 339 | Fire door 1 |
| Protecting aperture in door | Fire doors | FIRECORE Maxi & Mini fire door assemblies up to 4hr | Lorient LVH-D fire door ventilation grille | -/60/30 -/120/30 -/240/30 | 600 x 300mm 450 x 450mm 300 x 300mm | CSIRO FCO 3064 | Fire door 2 |
| Protecting aperture in door | Fire doors | PYROPANEL FR board and Pandor fire door assemblies up to 4 hr | Lorient LVH-D fire door ventilation grille | -/60/30 -/120/30 -/240/30 | 600 x 600mm 600 x 300mm 450 x 450mm 300 x 300mm | Exova EWFA 227704400 | Fire door 3 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|---------------------------------------|-----------------|--|--|---------|--|----------------|
| FIRE RESISTANT GLAZING SYSTEMS | | | | | | |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 6.5mm Georgian Wired Polished Plate glass | -/30/- | Max screen height 3000mm Max screen width - no limit Max individual pane size 1972mm x 906mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 10mm Pilkington Pyrodur glass | -/30/- | Max screen height 3000mm - Max screen width - no limit Max individual pane size 1969mm x 900mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 15mm Pilkington Pyrostop glass | -/30/30 | Max screen height 3m Max screen width - no limit Max individual pane size 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 16mm AGC Pyrobel glass | -/30/30 | Max screen height 3m Max screen width - no limit Max individual pane size 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with Schott Pyronova 30 glass | -/30/30 | Max screen height 3m Max screen width - no limit Max individual pane size 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 15mm Pilkington Pyrostop glass | -/60/30 | Max screen height 3m Max screen width - no limit Max individual pane size 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |

| Service Penetration | Orientation | Substrate | System Description | FRR | Test Dims | Report Ref. |
|---------------------------------------|-----------------|--|---|---------|---|----------------|
| FIRE RESISTANT GLAZING SYSTEMS | | | | | | |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 16mm AGC Pyrobel glass | -/60/30 | Max screen height 3m Max screen width - no limit Max individual pane size 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with Schott Pyronova 30 glass | -/60/30 | Max screen height 3m Max screen width - no limit Max individual pane size 1460mm x 460mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 23mm Pilkington Pyrostop glass | -/60/60 | Max screen height 3m Max screen width - no limit Max individual panesize 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with 25mm AGC Pyrobel glass | -/60/60 | Max screen height 3m Max screen width - no limit Max individual panesize 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 36 with Schott Pyronova 60 glass | -/60/60 | Max screen height 3m Max screen width - no limit Max individual pane size 2000mm x 1378mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screen | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 90+ with 6mm Pyroshield Safety Wired glass | -/60/- | Max screen height 3m Max screen width - no limit Max individual pane size 783mm x 923mm (clear opening) | BRANZ FAR 4524 |
| Fire rated window / glazed screens | Vertical (Wall) | Masonry or timber framed fire rated plasterboard walls | Lorient System 90+ with 6mm Pyran S | -/60/- | Max screen height 3m Max screen width - no limit Max individual pane size 923mm x 1923mm (clear opening) | BRANZ FAR 4524 |