

Technical Data Sheet

Astro Intu Mastic

UIC of product-type: INTUM

Revision 13 - 8th February 2022



ETA - 20-1088 / ETA - 20-1089		
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General Product Description

Astro Intu Mastic is an acrylic based sealant used to reinstate the fire resistance performance of wall and floor constructions where they have been provided with apertures for the penetrations of multiple services and to form linear gap seals where gaps are present in wall and floor constructions and linear joints where wall and floor constructions abut.

Astro Intu Mastic has slight intumescent properties that cause it to swell on heating.

The Astro Intu Mastic is supplied in liquid form contained within 310ml & 380ml cartridges, 600ml foils or in 5, 10, 20 or 25 kg tubs. The sealant is gunned or trowelled into the aperture in or between the separating elements/elements to a specific depth utilising various backing materials.

A polyethylene backing rod can be utilised as a depth gauge. Reaction to Fire classification 'F'

The Intended use of system Astro Intu Mastic is to reinstate the fire resistance performance of gaps in and joints between rigid and flexible wall constructions, gaps in and joints between rigid floor constructions.

The specific elements of construction that the system Astro Intu Mastic may be used to provide a gap or joints seal in, are as follow:

Rigid Floors

The floor must have a minimum thickness of 150mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650kg/m³.

Rigid walls

The wall must have a minimum thickness of 100mm and comprise concrete, aerated or masonry, with a minimum density of 650kg/m³

Flexible walls

The wall must have a minimum thickness of 100mm and comprise timber or steel studs lined on both faces with minimum 2 layers of 12.5mm thick, 'Type F' Gypsum boards according to EN 520. In timber stud walls, no part of the penetration shall be closer than 100mm to a stud, the cavity must be closed between the penetration seal and the stud and minimum 100mm of insulation of class A1 or A2 according to EN 13501-1, is provided within the cavity between the penetration seal and the stud.

Astro Intu Mastic is required to seal all joints and junctions during the sealing process of Astro Batt. Astro Coated Batt are 50mm thick and supplied in overall dimensions 1200mm x 600mm with a density 140kg/m³ and is subject to a separate ETA referenced 20-1091.

The Supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period.

The system Astro Intu Mastic may be used to provide a linear joint or gap seal with specific supporting constructions and substrates and as a penetration seal.

The maximum permitted joint/gap width for system Astro Intu Mastic[®] is 50mm. The maximum movement capability of system Astro Intu Mastic is ≤ 7.5%

Astro Intu Mastic has been tested in accordance with EOTA Technical Report - TR024 - Edition November 2006, for the type Z₁, use category specific in ETAG 026-3 (used as European Assessment Document, EAD). The results of the tests have demonstrated suitability for Penetration Seals and Linear Gap Joints.

Type Z : Intended for use In internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV.

****Where relevant Non combustible fixings are to be used in line with test data to secure the product to the relevant substrate. Please contact us for further details.****

Air permeability

System Astro Intu Mastic has been tested in accordance with BS EN 1314-1 to provide the following results:

Product tested		Astro Intu Mastic intumescent sealant		
	Results under positive chamber pressure		Results under negative chamber pressure	
Pressure (Pa)	Leakage (m ³ /h)	Leakage (m ³ / M ² /h)	Leakage (m ³ /h)	Leakage (m ³ /m ² /h)
50	0.6	0.8	1.1	1.5
100	1.0	1.4	1.3	1.8
150	2.8	3.9	1.5	2.1
200	3.8	5.3	1.9	2.6
250	4.5	6.3	2.0	2.8
300	5.0	6.9	2.4	3.3
450	5.1	7.1	1.9	2.6
600	6.7	9.3	2.2	3.1

Airbourne Sound Insulation

Acoustic Rating BS EN ISO 10140-3:1995	Rw(C;Ctr) :38(-2;-7) dB
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Dangerous substances

A declaration that Astro Intu Mastic does not contain any substance of high concern with regards to REACH Regulations and are compliant with the requirements.

Confirmation has further been declared that all dangerous chemical substances ≥ 1.0 % w/w as well as all toxic, carcinogenic, toxic for reproduction and mutagenic chemical substances ≥ 0.1 % w/w (Status: 29. adaption – 2004/73/EG – of the EU directive 67/548/EEC - classification, packaging and labelling of dangerous substances) are stated in the Astro Intu Mastic safety data sheets (according to 91/155/EEC including amendments) and have been considered for the classification of the products according to the directive 1999/45/EG (classification of preparations, including amendments).

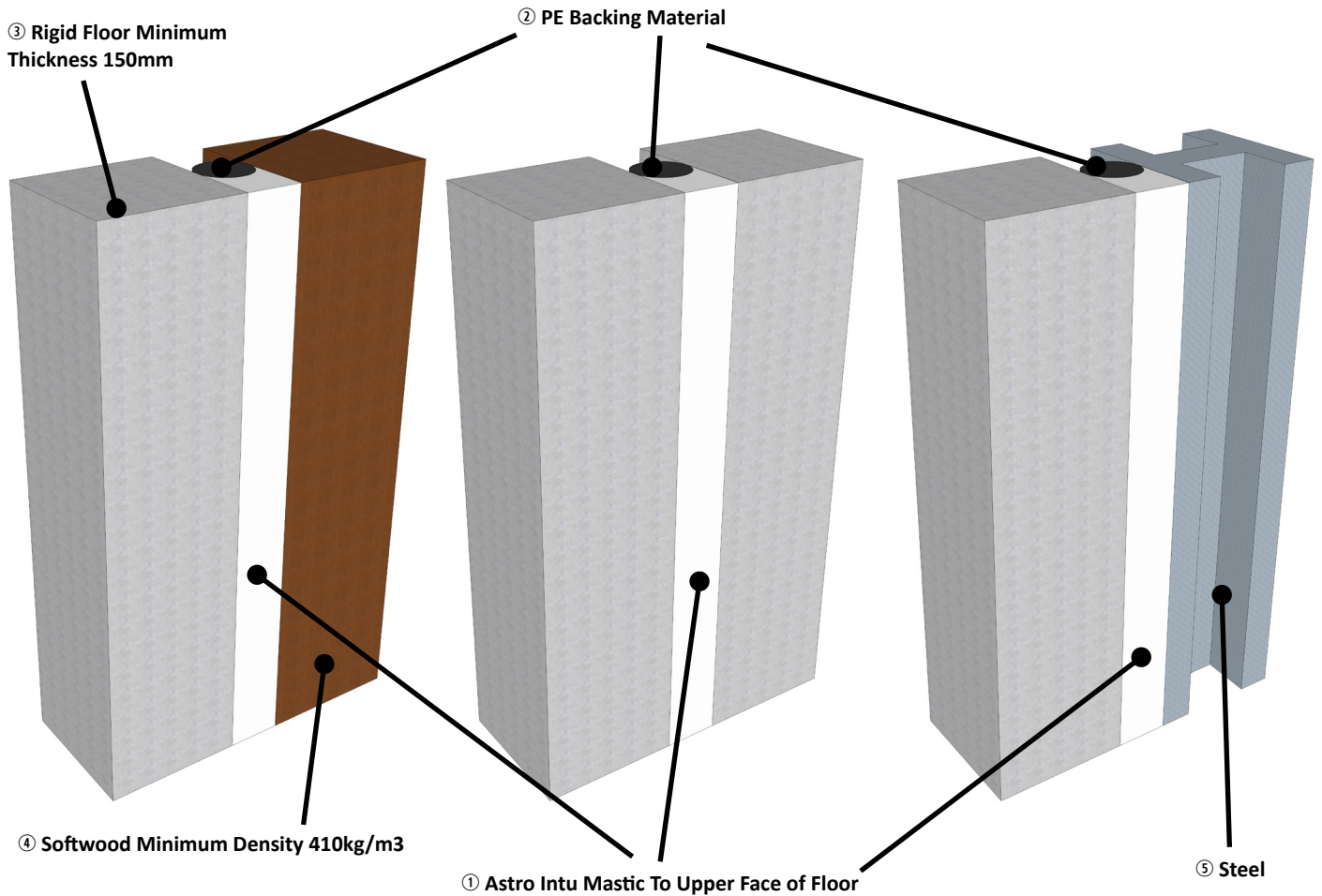
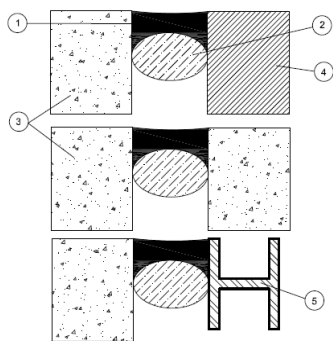
All dangerous chemical substances are below the classification limits of 67/548/EEC.

In addition to the specific clauses relating to dangerous substances contained in this European technical approval, there may be other requirements applicable to the products falling within its scope (e.g. transposed European legislation and national laws, regulations and administrative provisions). In order to meet the provisions of the Construction Products Regulation, these requirements need also to be complied with, when and where they apply.

The provisions made in the European Technical Assessment are based on an assumed working life of the Astro Intu Mastic of 10 years, provided that the conditions laid down in sections 4.2/5.1/5.2 for the packaging/transport/storage/installation/use/ repair are met. The indications given on the working life cannot be interpreted as a guarantee given by the producer but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

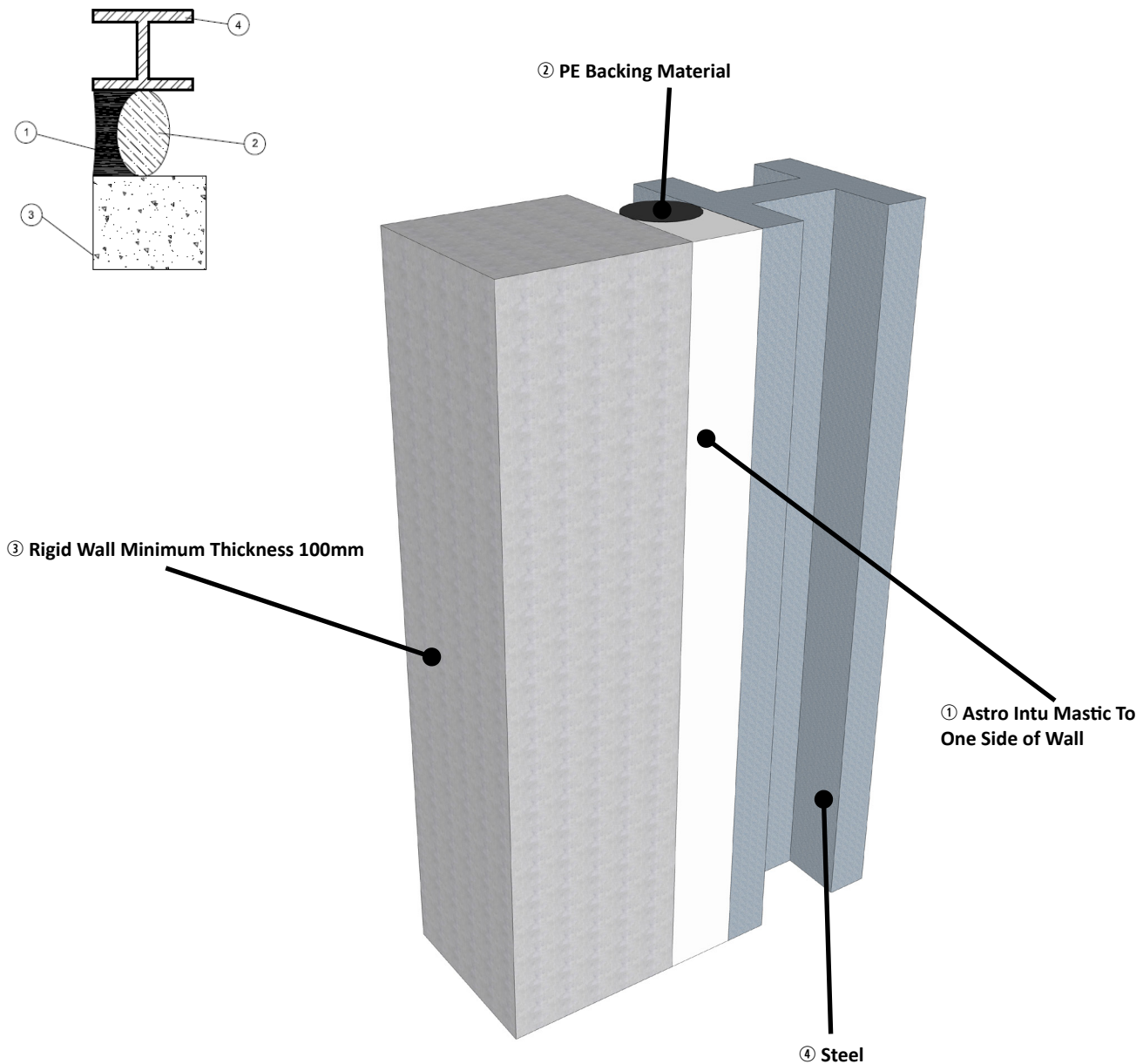
Astro Intu Mastic Linear Joint Seals. Min 150mm thick Rigid Floor, Horizontally orientated to one side of the floor			
Substrate	Depth (mm)	Backing material	Classification
Concrete-Concrete	10(Single side)	PE backing rod	E240 EI45-H-X-F-W 00 to 20
Concrete-Concrete	25(Single Side)	PE backing rod	E240 EI90-H-X-F-W 00 to 50
Concrete-Steel	10(Single Side)	PE backing rod	E120 EI20-H-X-F-W 00 to 20
Concrete-Steel	50(Single Side)	PE backing rod	E240 EI90-H-X-F-W 00 to 50
Concrete-Softwood	10(Single Side)	PE backing rod	EI30-H-X-F-W 00 to 20
Concrete-Softwood	50(Single Side)	PE backing rod	EI45-H-X-F-W 00 to 50

DESIGN TO ETA 20-1089 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT JOINT THROUGH RIGID FLOOR

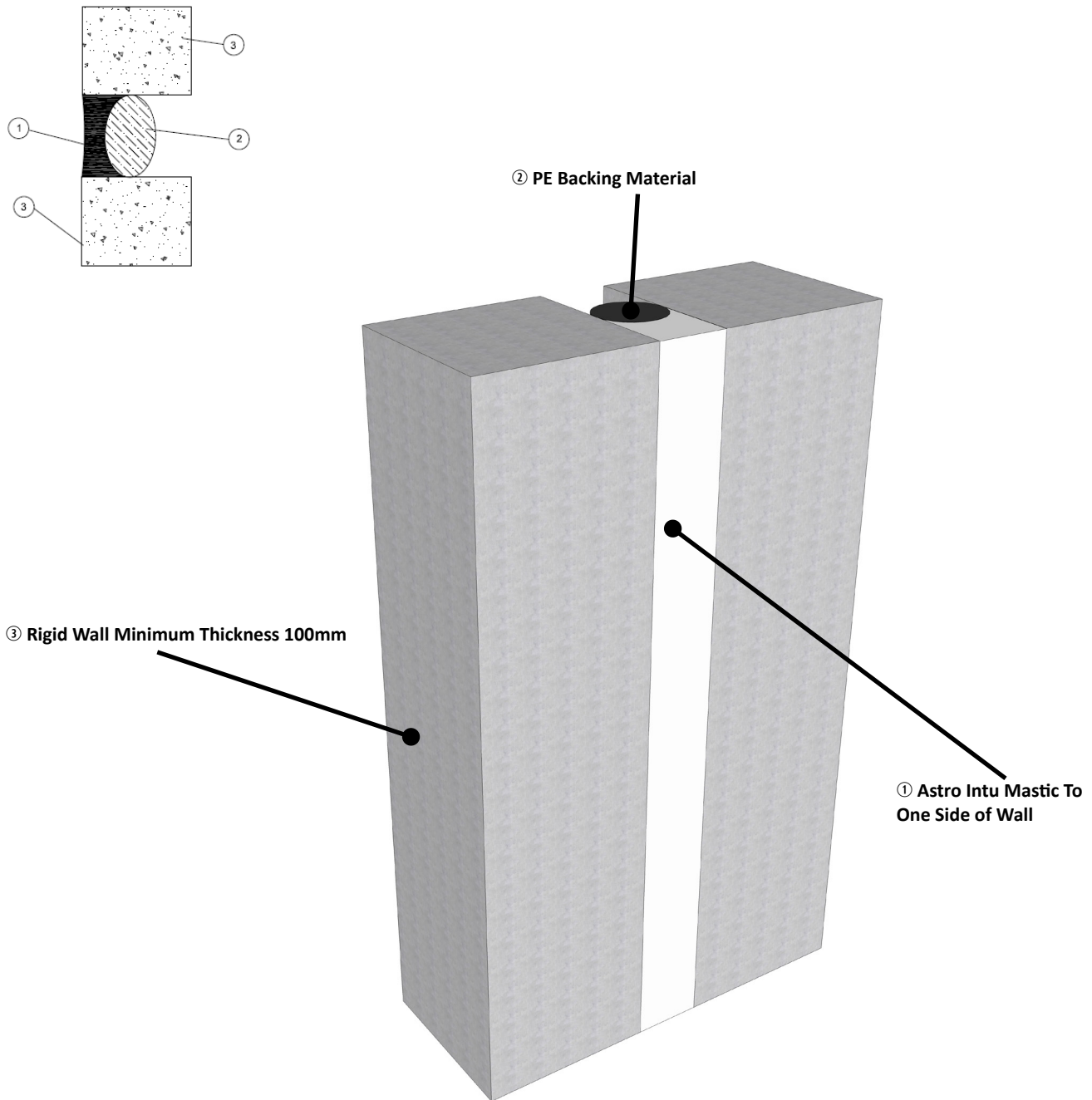


Astro Intu Mastic Linear Joint Seals. Min 150mm thick Rigid Floor, Horizontally orientated to one side of the floor			
Substrate	Depth (mm)	Backing material	Classification
Concrete-Concrete	10(Single side)	PE backing rod	E120 EI45-V-X-F-W 00 to 20
Concrete-Concrete	25(Single Side)	PE backing rod	E120 EI60-V-X-F-W 00 to 50
Concrete-Steel	10(Single Side)	PE backing rod	E120 EI20-V-X-F-W 00 to 20
Concrete-Steel	50(Single Side)	PE backing rod	E45 EI30-V-X-F-W 00 to 50
Concrete-Softwood	10(Single Side)	PE backing rod	E30 EI20-V-X-F-W 00 to 20
Concrete-Softwood	50(Single Side)	PE backing rod	EI45-V-X-F-W 00 to 50

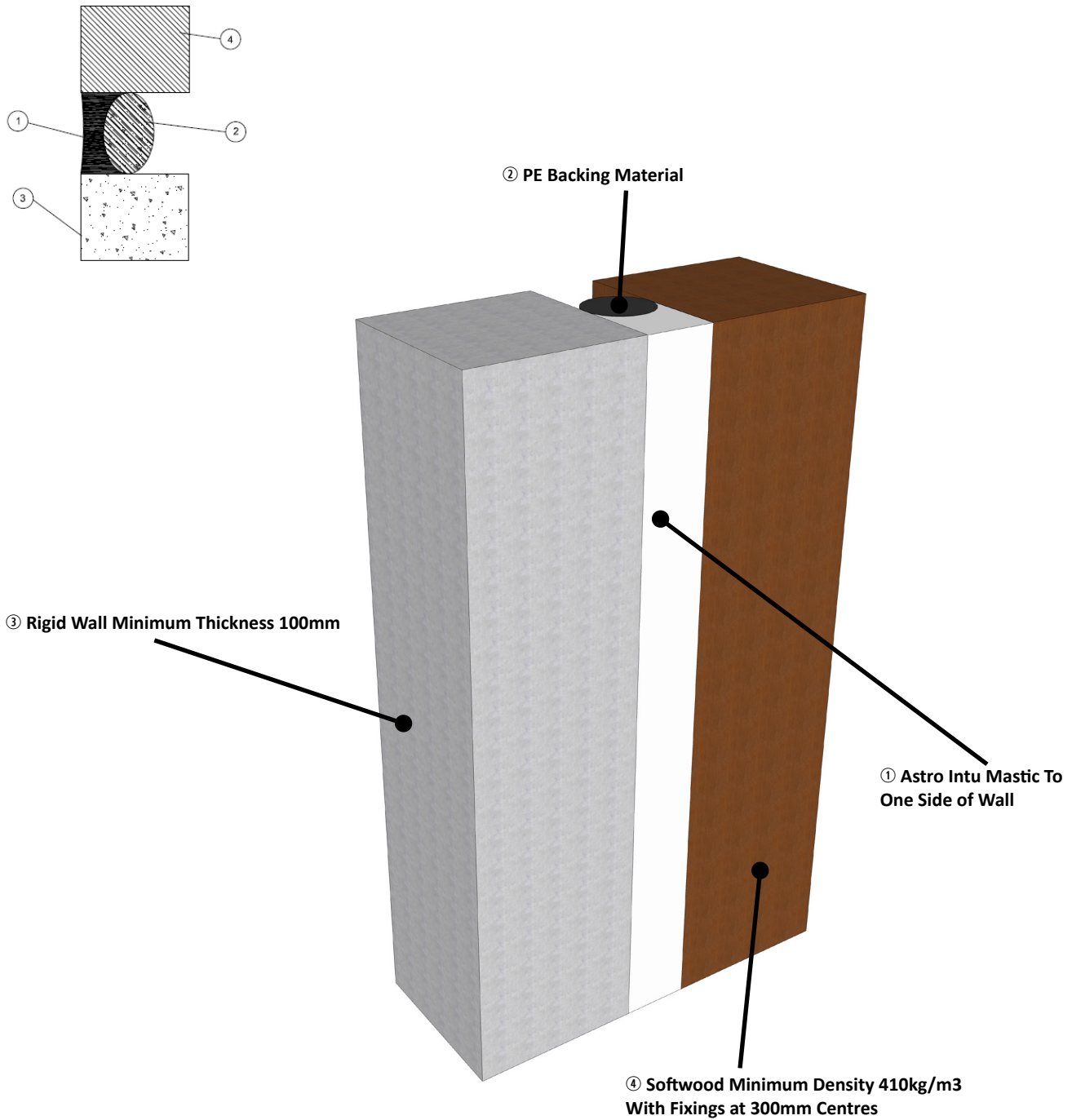
DESIGN TO ETA 20-1089 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT JOINT THROUGH RIGID FLOOR AND STEEL



DESIGN TO ETA 20-1089 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT JOINT THROUGH RIGID WALL

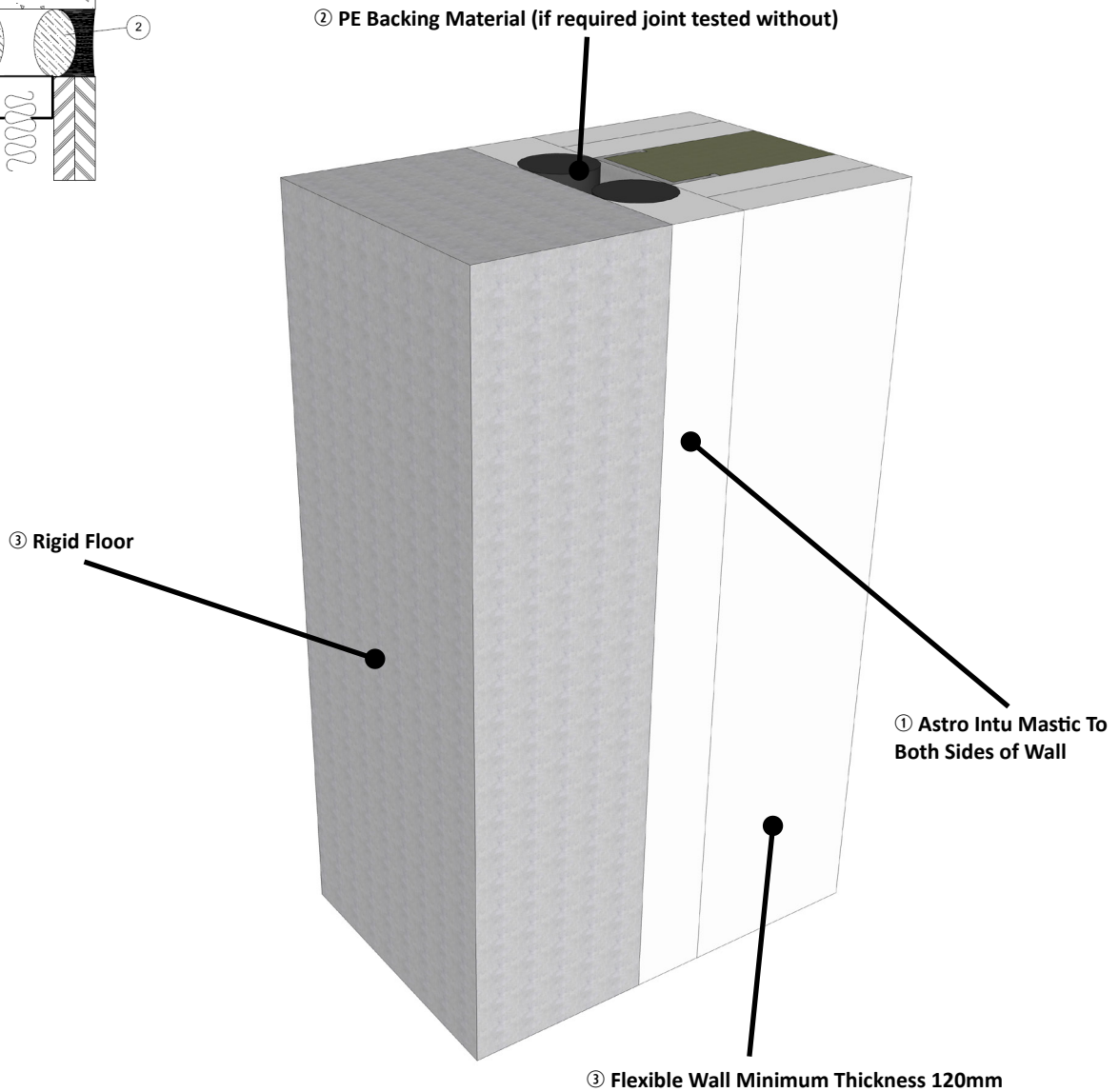
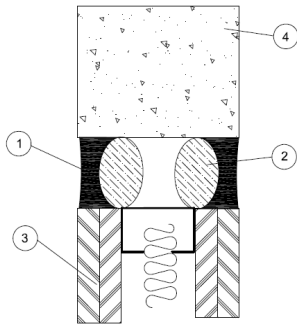


DESIGN TO ETA 20-1089 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT JOINT THROUGH RIGID WALL AND SOFTWOOD



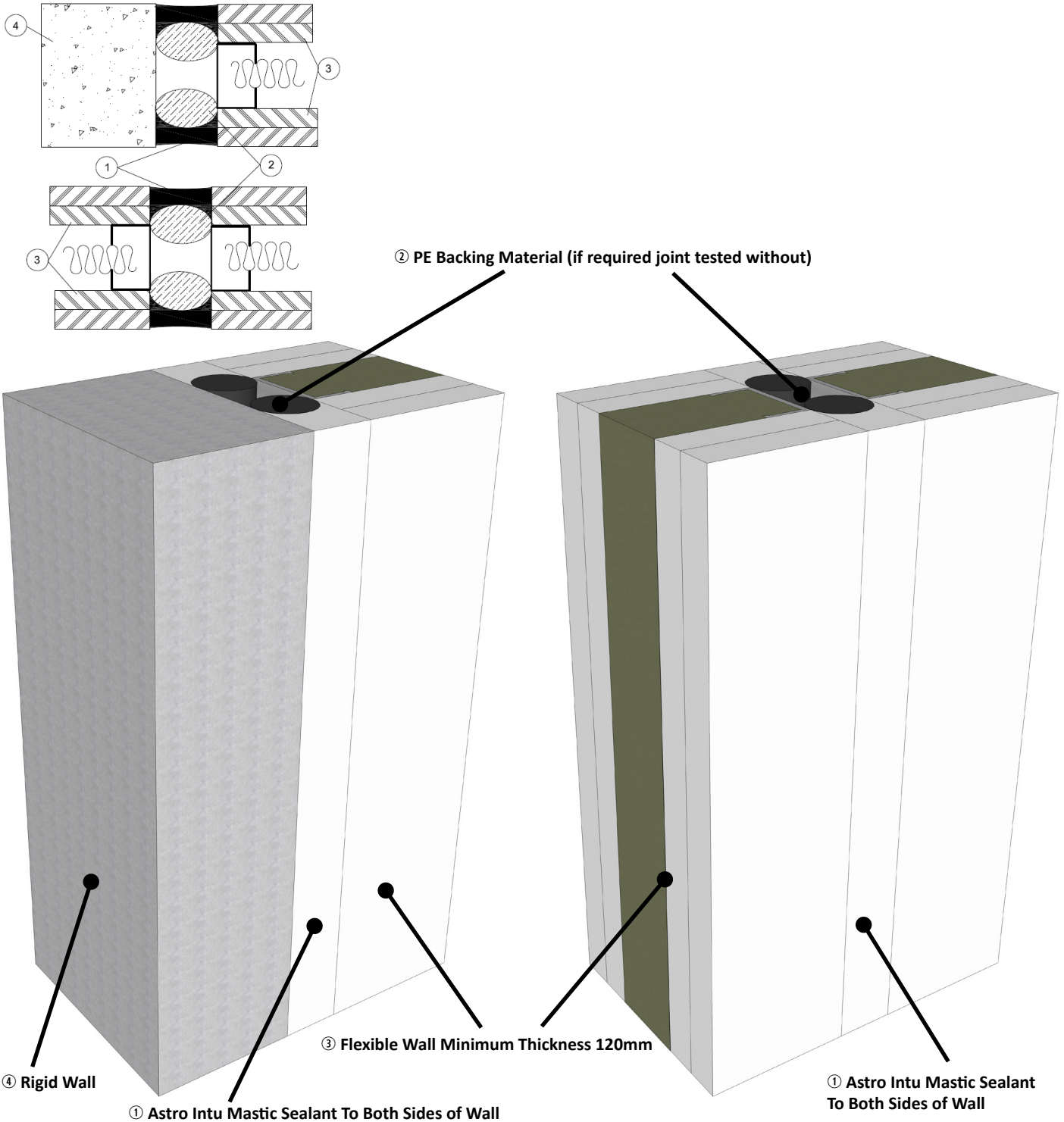
Astro Intu Mastic Linear Joint Seals. Min 120mm thick - Sealing of Drywall Head Track - Sealant Flush To Both Faces of The Wall. Horizontally Orientated Sealant To Both Sides of The Wall		
Substrate	Depth (mm)	Classification
Gypsum board/Steel head track	25mm (both side)	EI120-V-X-F-W 00 to 50
Gypsum board/Steel head track	25mm (both side)	EI120-V-X-F-W 00 to 50

DESIGN TO ETA 20-1089 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT JOINT THROUGH FLEXIBLE WALL HORIZONTAL ORIENTATION



Astro Intu Mastic Linear Joint Seals. Min 120mm Thick Flexible or Rigid Wall. Sealant Flush to Both Faces of The Wall		
Depth (mm)	Backing material	Classification
12.5(Both side)	PE backing rod	EI120-V-X-F-W 00 to 20

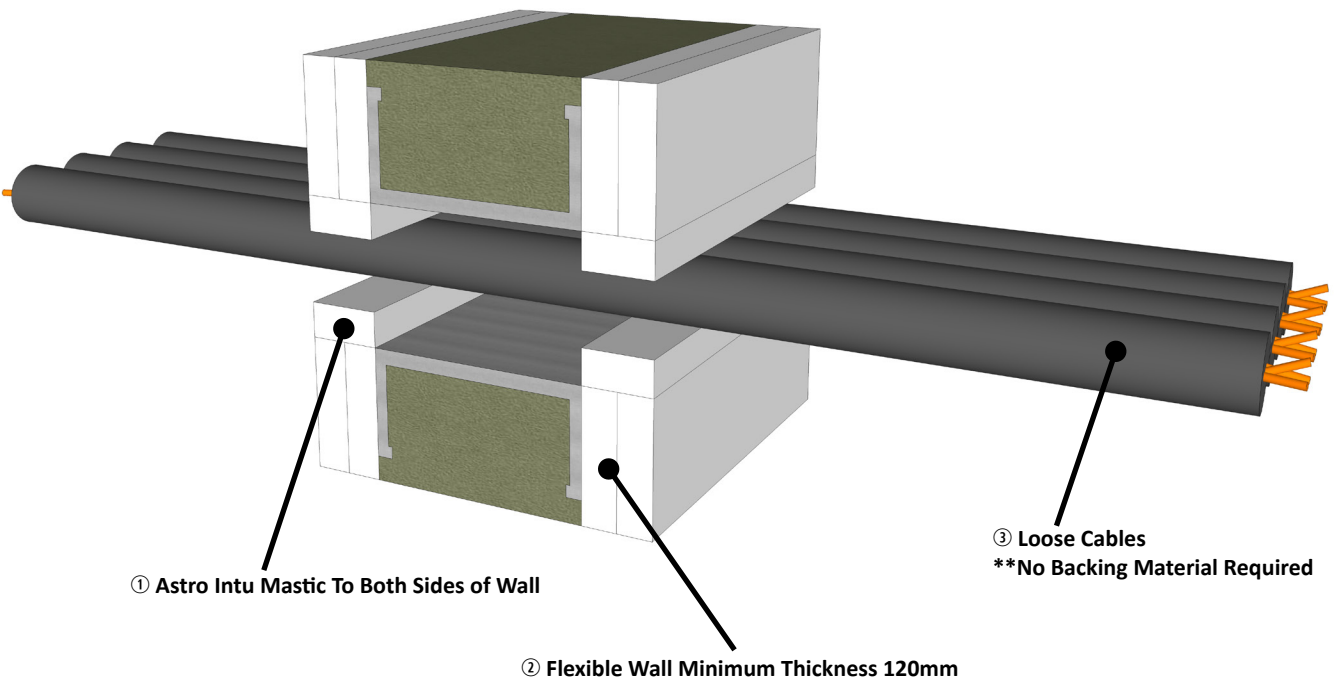
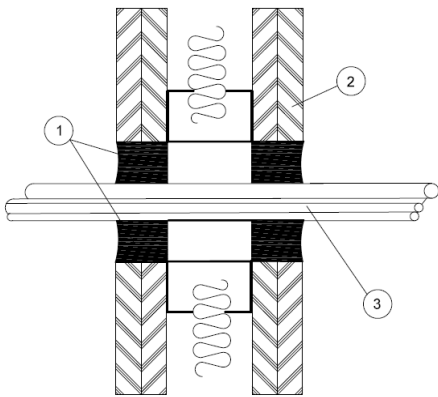
DESIGN TO ETA 20-1089 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT JOINT THROUGH FLEXIBLE WALL VERTICAL ORIENTATION



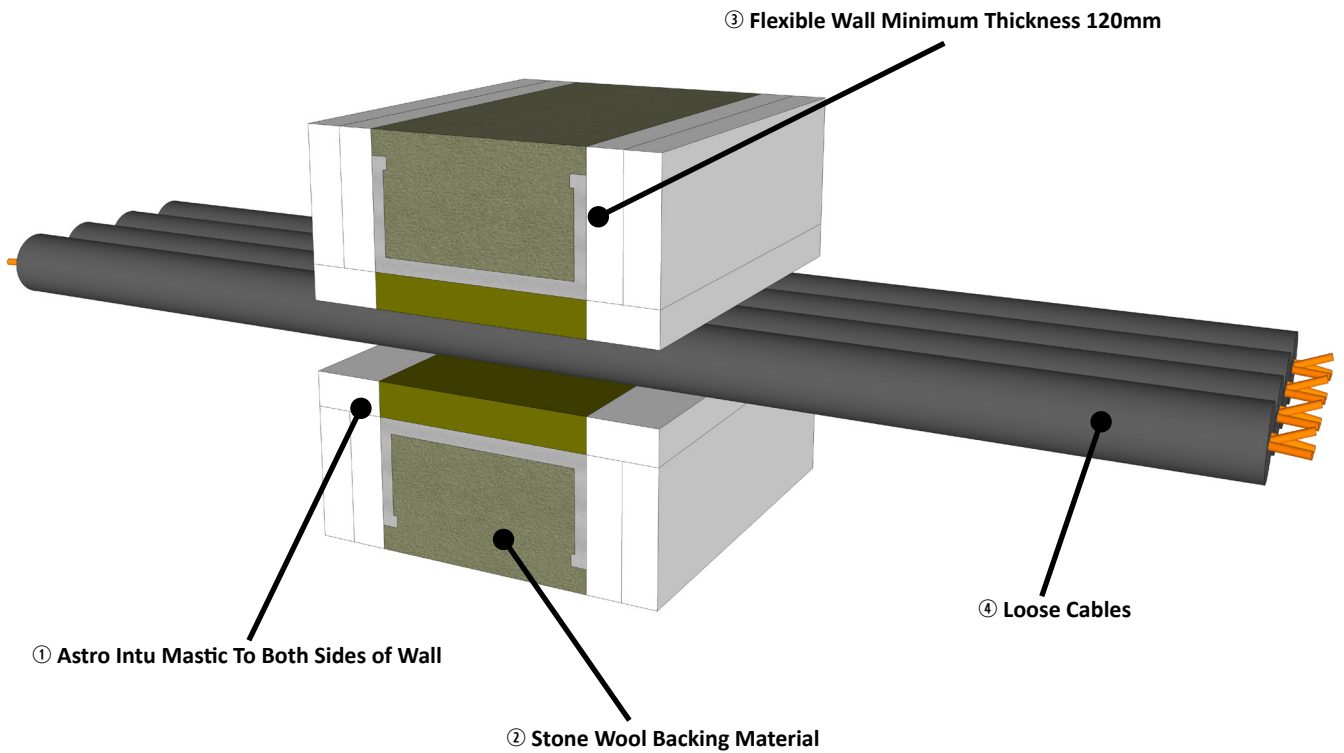
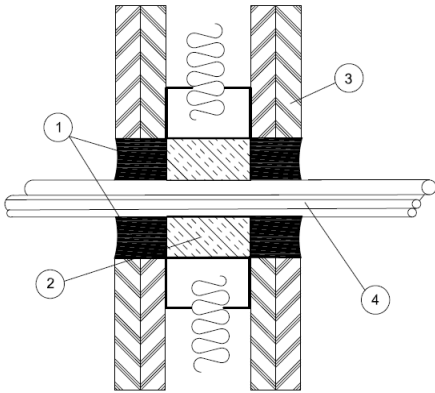
DET 8-0037 Date: 21/01/14

Astro Intu Mastic Linear Joint Seals. Min 120mm flexible wall, Horizontally orientated to both sides of the wall. Sealant to both sides of the wall			
Penetration Specification	Astro Intu Mastic® (installed Both Faces)	Backing material	Classification
Cables up to 21mm	490mm long x 100mm high x 25mm deep	70mm thick, 80kg/m ³	E120 EI90
Perforated Cable Tray 450mm x 50mm			
Cables up to 21-50mm	200mm long x 100mm high x 25mm deep	N/A	E90 EI60

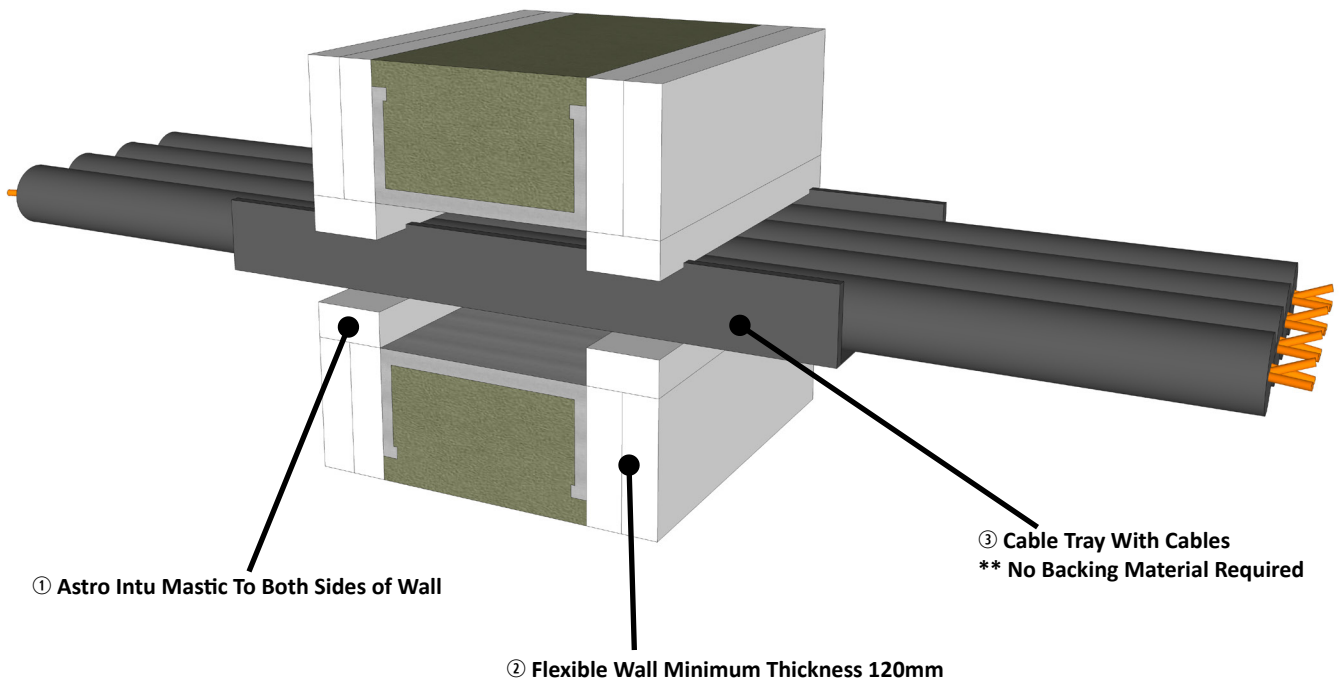
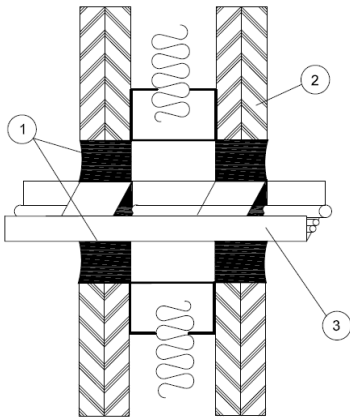
DESIGN TO ETA 20-1088 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT LOOSE CABLE PENETRATION SEAL THROUGH FLEXIBLE WALL HORIZONTAL ORIENTATION WITHOUT BACKING MATERIAL



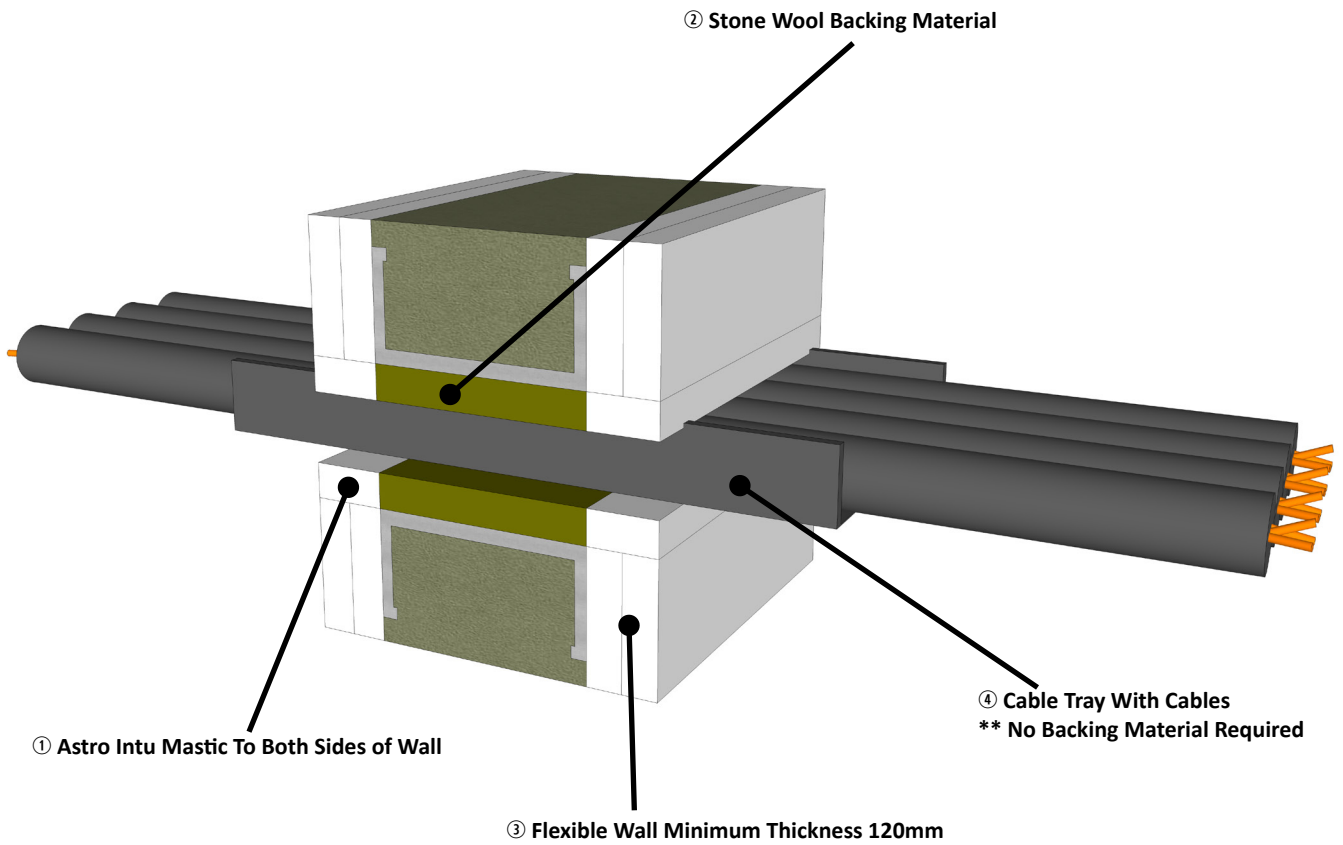
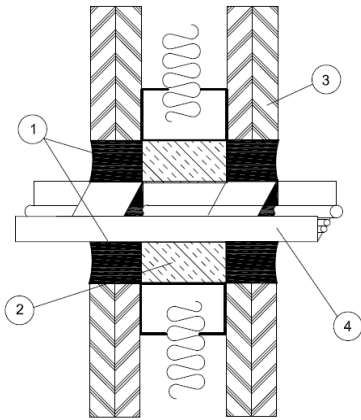
DESIGN TO ETA 20-1088 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT LOOSE CABLE PENETRATION SEAL THROUGH FLEXIBLE WALL HORIZONTAL ORIENTATION



DESIGN TO ETA 20-1088 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT CABLE TRAY & CABLE PENETRATION SEAL THROUGH FLEXIBLE WALL HORIZONTAL ORIENTATION WITHOUT BACKING MATERIAL

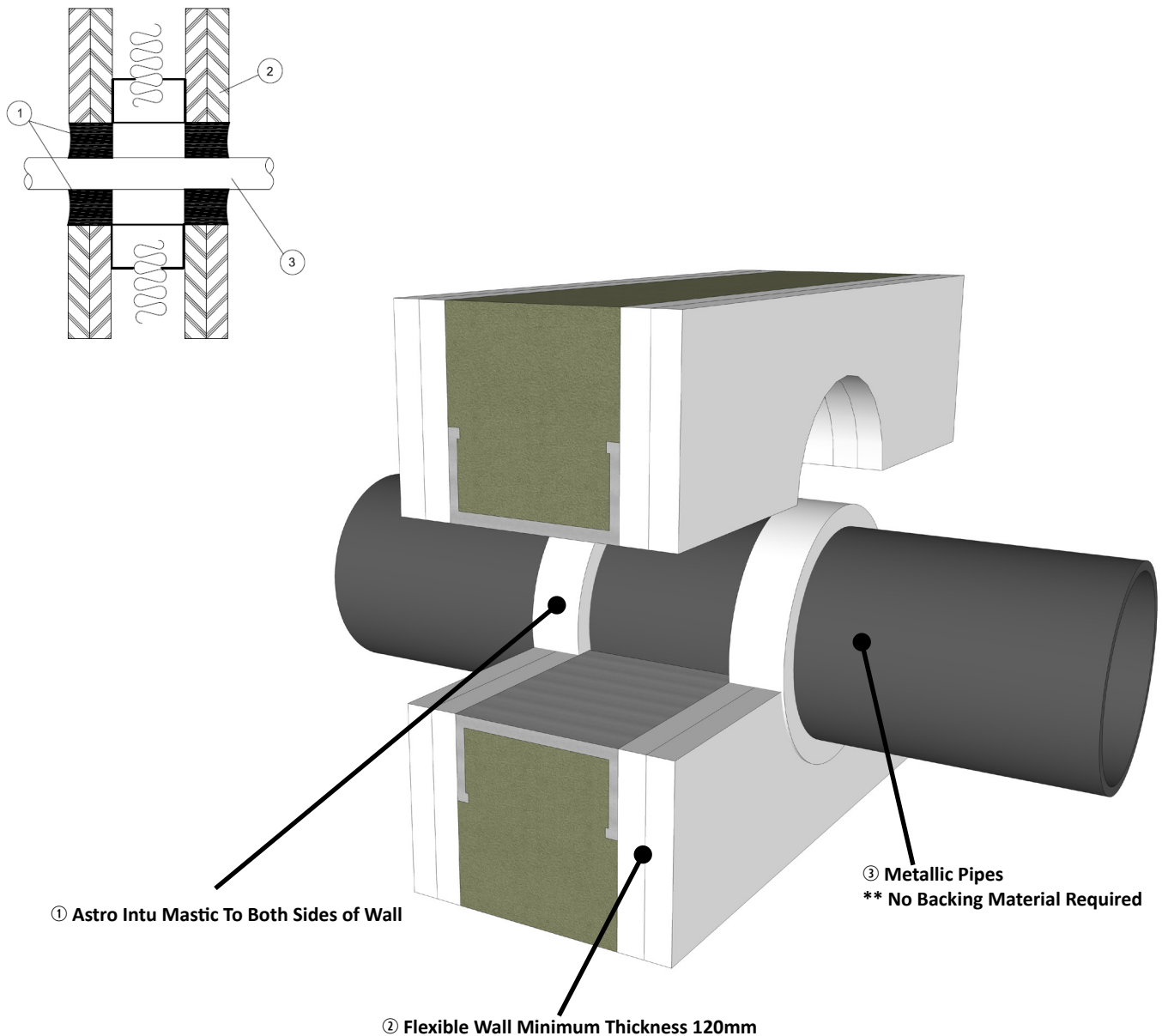


DESIGN TO ETA 20-1088 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT CABLE TRAY & CABLE PENETRATION SEAL THROUGH FLEXIBLE WALL HORIZONTAL ORIENTATION

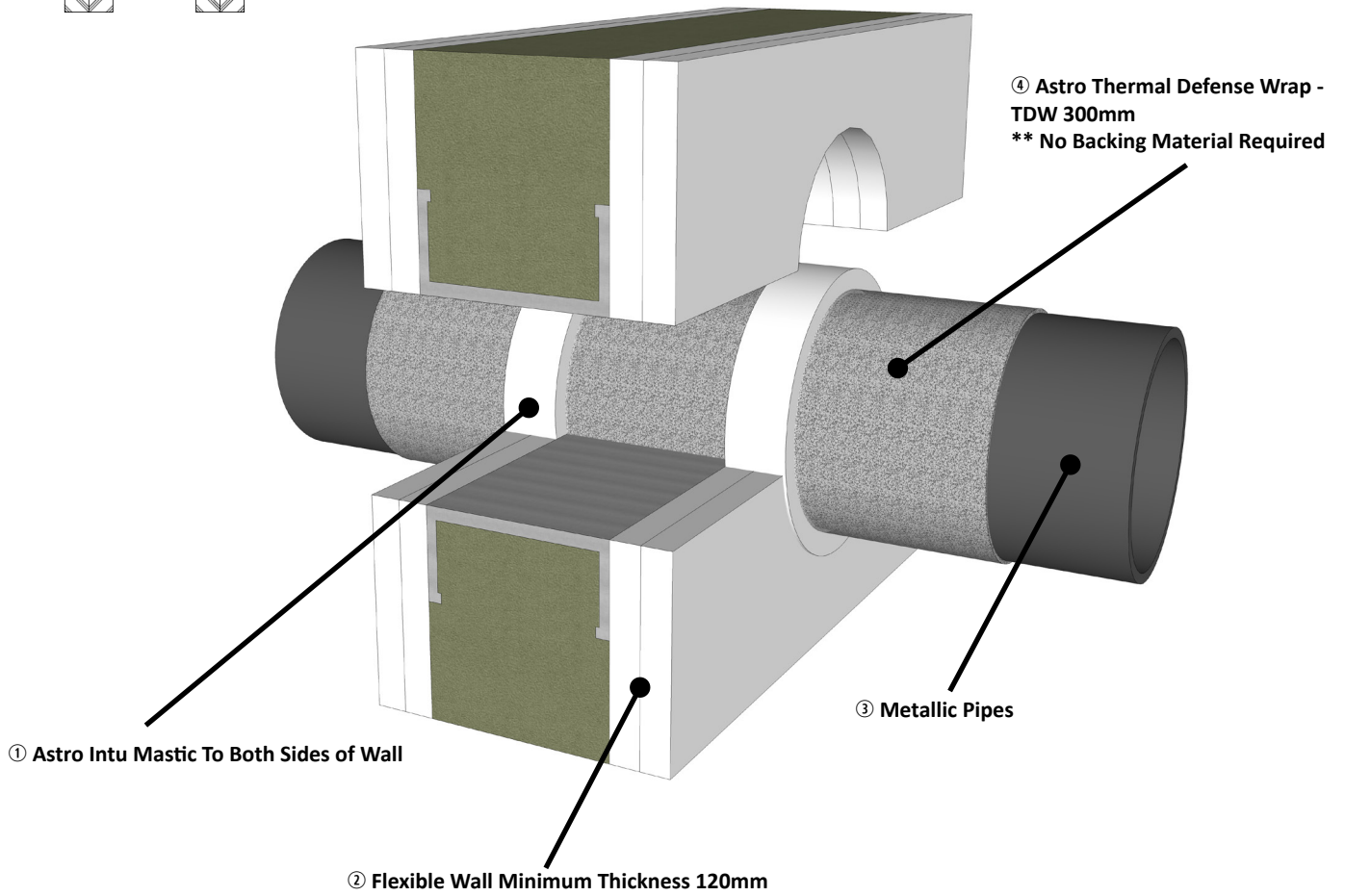
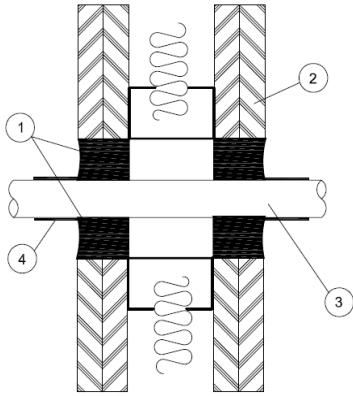


Astro Intu Mastic Linear Joint Seals. Min 120mm Thick Flexible or Rigid Wall. Sealant to Both Sides of The Wall.			
Penetrations Specification	Depth (mm)	Backing material	Classification
Copper/Steel Pipe 15mm Ø, 0.8mm - 7.4 wall thickness	10mm annulus x 25mm deep	N/A	E120 C/U EI20 C/U
Copper/Steel Pipe 40mm Ø, 0.8mm - 14.2mm wall thickness	10mm annulus x 25mm deep	N/A	E120 C/U EI15 C/U
Copper/Steel Pipe 40-159mm Ø, 1.8mm - 14.2mm wall thickness	10mm annulus x 25mm deep	N/A	E120 C/U
Copper/Steel Pipe 40mm Ø, 0.8mm - 14.2mm wall thickness*	10mm annulus x 25mm deep	N/A	E120 C/U EI90 C/U
Copper/Steel Pipe 40-159mm Ø, 1.8mm - 14.2mm wall thickness*	10mm annulus x 25mm deep	N/A	E120 C/U EI20 C/U

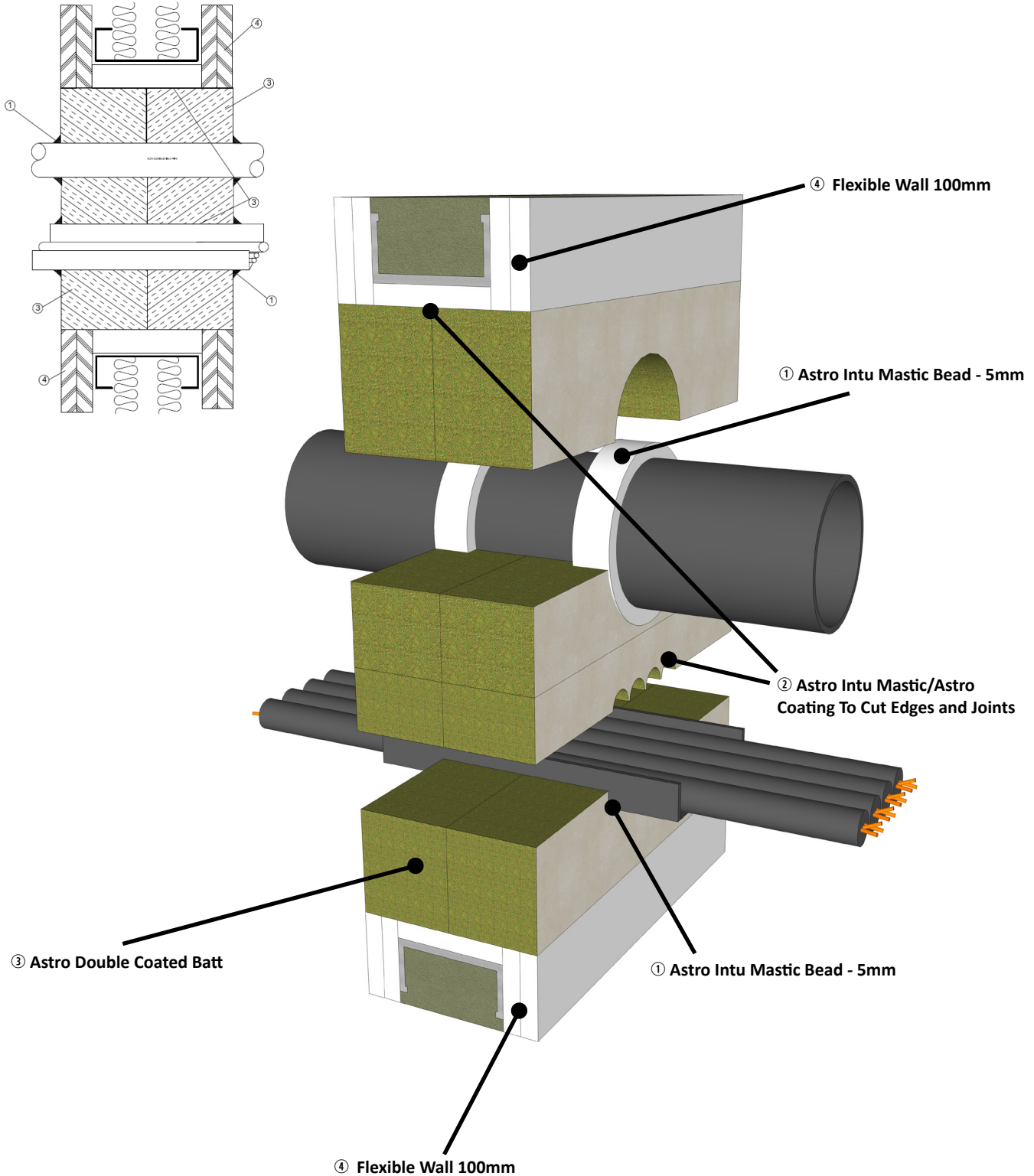
DESIGN TO ETA 20-1088 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT METALLIC PIPE PENETRATION SEAL THROUGH FLEXIBLE WALL HORIZONTAL ORIENTATION WITHOUT BACKING MATERIAL



DESIGN TO ETA 20-1088 & CE 2531-CPR-CXO10294 ASTRO INTU MASTIC FIRE RESISTANT METALLIC PIPE PENETRATION SEAL WITH TDW THROUGH FLEXIBLE WALL HORIZONTAL ORIENTATION WITHOUT BACKING MATERIAL



DETAIL OF INSTALLATION OF ASTRO INTU MASTIC TO SEAL ASTRO BATT SYSTEM IN A MULTI PENETRATION SEAL



XHHW & XHHW7.R27645

UL Certification Fill or Cavity Materials Certified for US & Canada

Astro Intu Mastic covers the fire exposure and hose stream tests conducted under UL Project No. 13CA05419. The fire exposure and hose stream tests were conducted in accordance with the Fourth edition of the Standard, December 12, 2012 and the Fourth Edition of the Standard, Fire Tests of Firestop Systems, CAN/ULC-S115-11, June 2011.

Test Assembly:

The test assembly consisted of a concrete floor and a steel stud/gypsum board wall assembly. The test assembly consisted of one head-of-wall joint system and two wall-to-wall joint system. The construction details of each joint system are described below:

Head of Wall

Nominal 25mm depth of sealant in 50mm wide joint, finished flush to each of the wall. Sealant backed with 80mm deep mineral wool 60kg/m³. Faces of the joint finished with steel studs but unlined.

Wall to Wall

Nominal 25mm depth of sealant in 10mm wide joints, finished flush to each face of the wall. Sealant backed with 120mm deep mineral wool 60kg/m³. Faces of the joint finished with steel studs but unlined.

Wall to Wall

Nominal 25mm depth of sealant in 50mm wide joint, finished flush to each face of the wall. Sealant backed with 80mm deep mineral wool 60kg/m³. Faces of the joint finished with steel studs but unlined.

Astro Intu Mastic for use in joint system described in Vol.2 of the UL Fire Resistance Directory. The specific system Nos. and the applicable rating information are as follows:

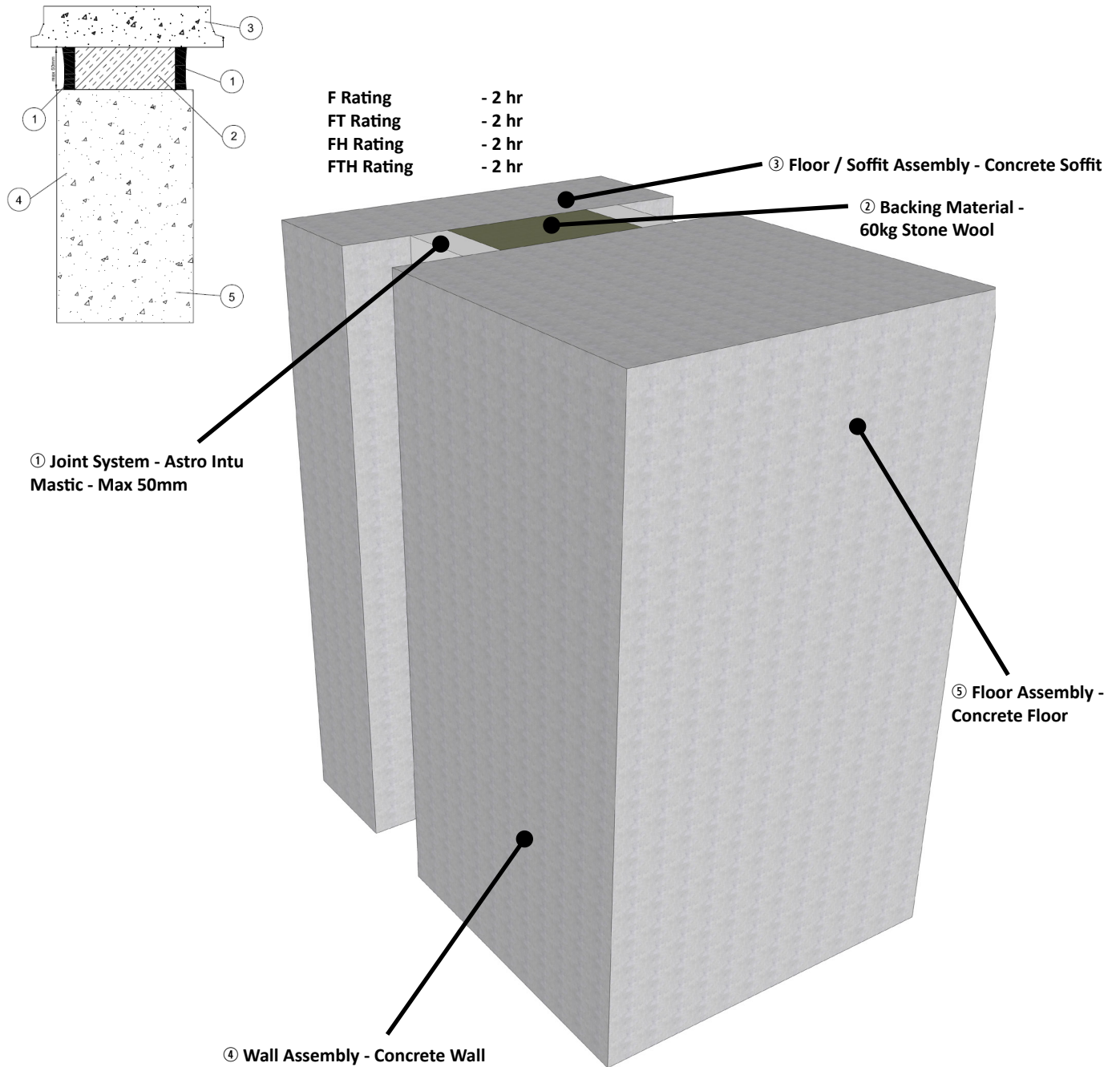
System No.	Rating, Hr			
	F	FT	FH	FTH
HW-S-0102	2	2	2	2
HW-S-0103	2	2	2	2

Astro Intu Mastic for use in Joints Systems described in the product Certified for Canada Directory. The specific System No. and the applicable rating information are as follows:

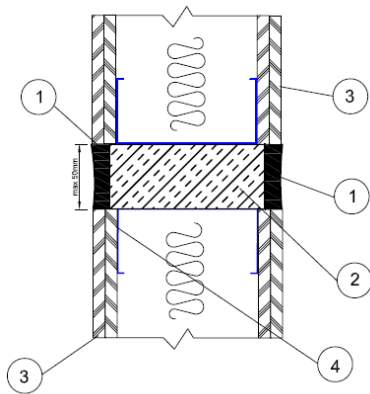
System No.	Rating, Hr			
	F	FT	FH	FTH
HW-S-0065	2	2	0	0
HW-S-0066	2	2	0	0

Maximum Joint Width, mm (in)	Min Sealant Thickness, mm (in)	Min packing Material Thickness, mm (in)
10 (3/8)	5 (1/4)	120 (4-3/4)
20 (7/8)	10 (3/8)	110 (4-3/8)
30 (1-1/4)	15 (5/8)	100 (4)
40 (1-5/8)	20 (3/4)	90 (3-1/2)
50 (2)	25 (1)	80 (3-1/8)

UL (C & US) SYSTEM DESIGN No. XHBN-HW-0102 ASTRO INTU MASTIC FIRE RATED JOINT THROUGH CONCRETE FLOOR / CONCRETE ASSEMBLY HEAD OF WALL



UL SYSTEM DESIGN No. XHBN-WW-0066 ASTRO INTU MASTIC FIRE RATED JOINT THROUGH LIGHTWEIGHT PARTITION



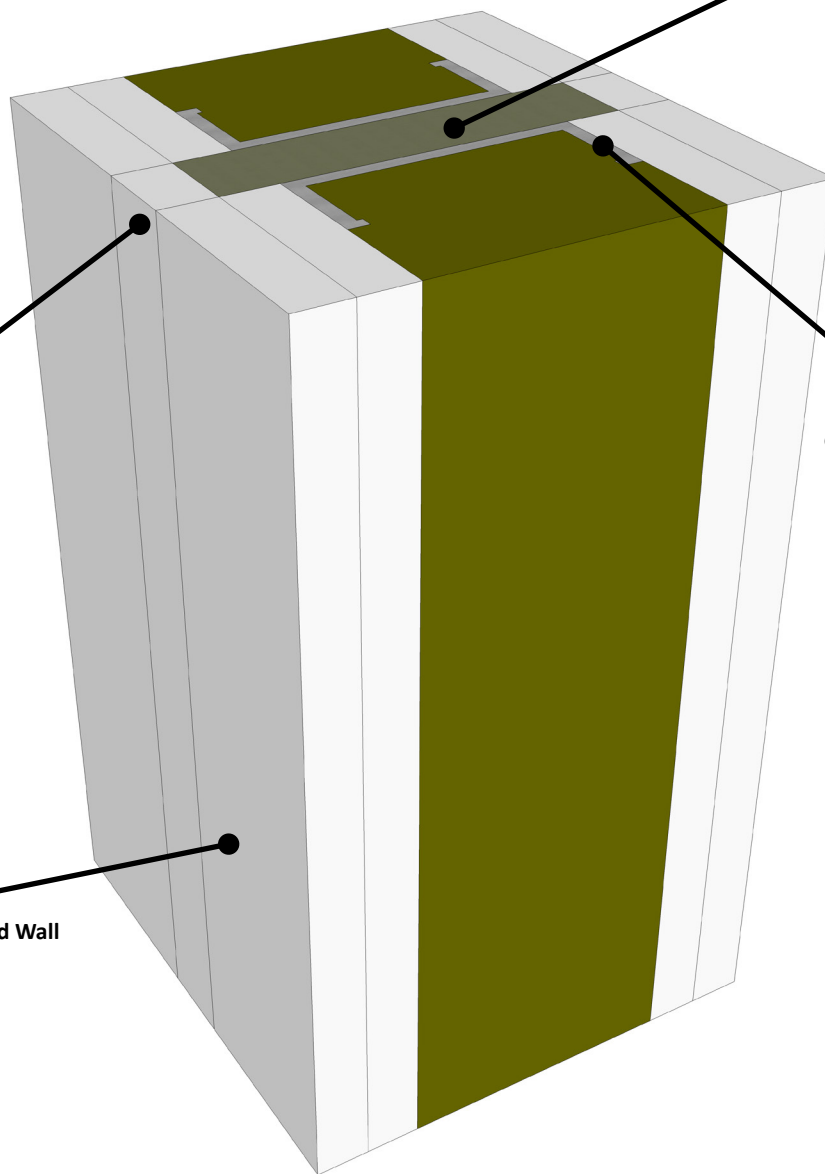
F Rating	- 2 hr
FT Rating	- 2 hr
FH Rating	- 0 hr
FTH Rating	- 0 hr

② Backing Material - 60kg Stone Wool

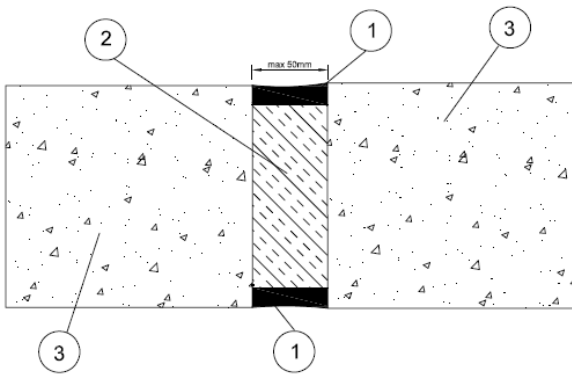
① Joint System - Astro Intu Mastic - Max 50mm

④ Partition - Metal Stud

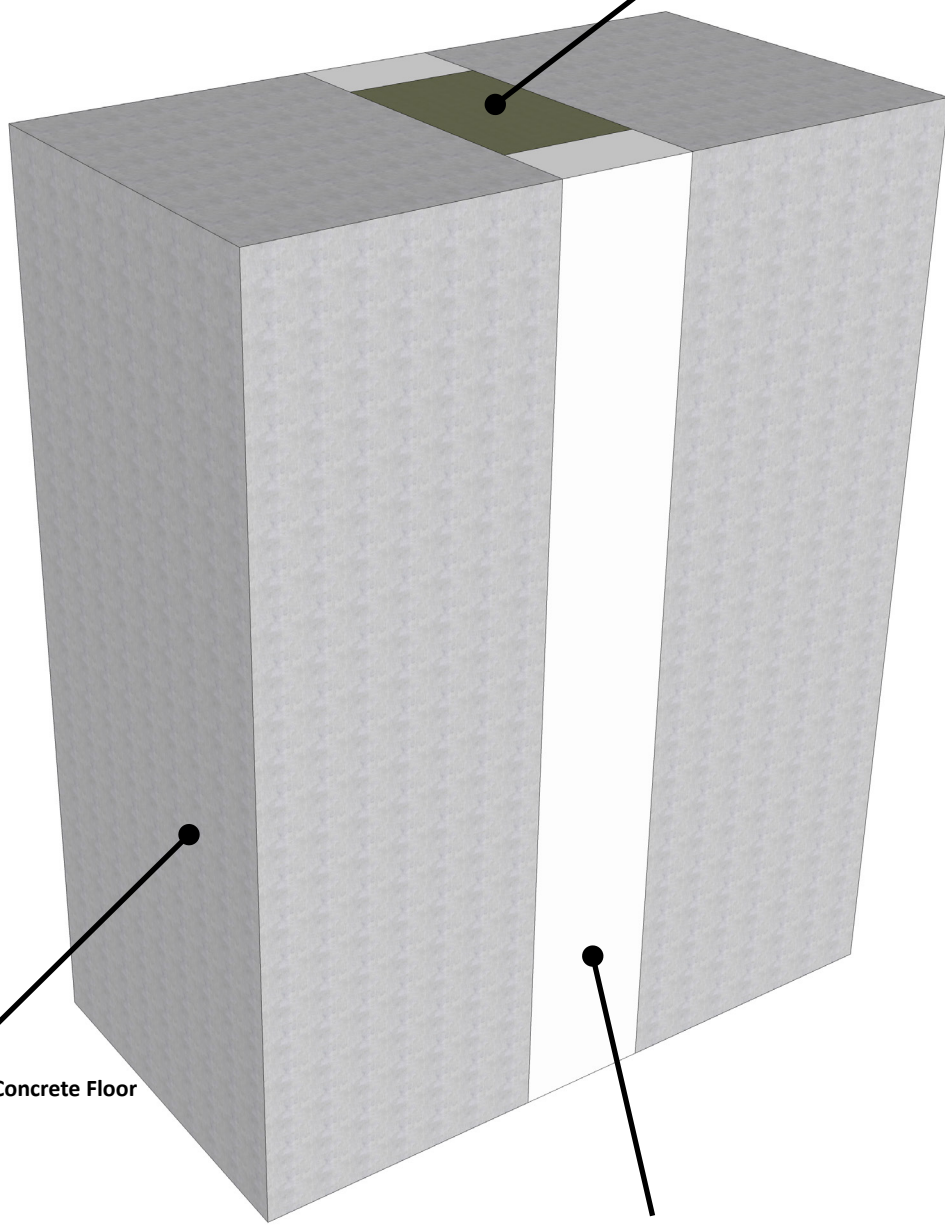
③ Wall Assembly - Plasterboard Wall



UL SYSTEM DESIGN No. XHBN-WW-0065 ASTRO INTU MASTIC FIRE RATED JOINT THROUGH CONCRETE WALL / CONCRETE WALL ASSEMBLY



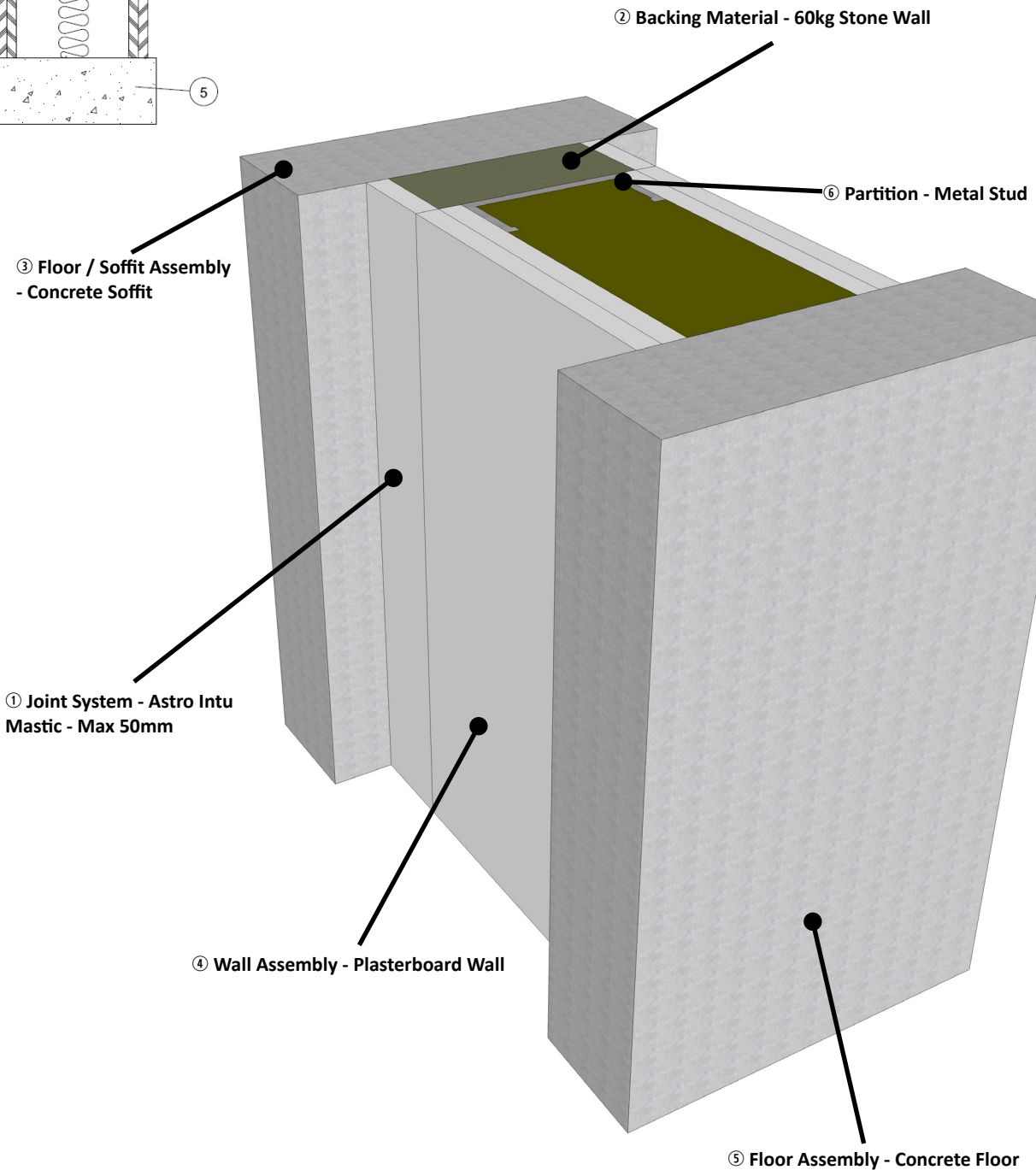
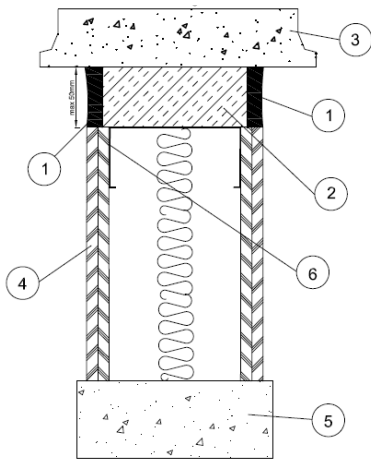
② Backing Assembly - 60kg Stone Wool



③ Floor Assembly - Concrete Floor

① Joint System - Astro Intu Mastic - Max 50mm

UL (C & US) SYSTEM DESIGN No. XHBN-HW-0103 ASTRO INTU MASTIC FIRE RATED JOINT THROUGH CONCRETE FLOOR / LIGHTWEIGHT PARTITION ASSEMBLY HEAD OF WALL



Durability and Serviceability

Type Z₁: Intended for use internal conditions with humidity equal to or higher than 85% RH excluding temperatures below 0°C, without exposure to rain or UV. The Durability conditions specified for this material was Type Z₁ (23°C, 40°C). this is and 8 and 16 hours cycled program with extremities of 23°C and 40°C lasting for 21 days.

ISO7619-1(2010) Hardness after Curing using Ceast Shore 'A' bench-top durometer (T13) Readings taken after 15s Conditions: 23°C 50% RH

ISO8339:2005 Tensile Properties using instron 6025 test frame, 1kN load cell, environmental chamber, pneumatic grips Conditions: Test rate 5.5mm/s. Temperature as indicate.

Note: Three specimens prepared as controls and for durability using M2 mortar and 12mm spacers as indicate in ISO 8339.

ISO9046;2005 Adhesion properties using instron 5500 test frame, pneumatic grips, 1kN load cell

Conditions: 23°C 50%RH

Notes: Three specimens prepared as controls and for durability using M2 mortar and 12mm spacers as indicated in ISO 9046

LEED 2009 EQ c4.1, SCAQMD rule 1168 (2005) - VOC

Sample identification	Astro Intu Mastic
Product type	Sealant - Other (Fire Resistance)
Product Data	Density: 1.6g/ml at 20°C Water content: 32.5 g/l Exempt Compounds: none ***

Method	Principle	Parameter	Detection Limit	Uncertainty Um (%)
LEED 2009 EQ c4.1	Gravimetric	Total Volatiles, SCAQMD rule 204	1 g/l	10%
Volatile content of the sample was determined gravimetrically by heating up to 110°C during 60 minutes. The result is the average of double testing. The result was calculated as: ([g all volatiles] - [g exempt compounds]) / ([l material] - [l water] - [l exempt compounds])				

Solid content	Water content, % mass	Exempt compounds, % mass	VOC less water less ex- empt compounds, g/l	VOC limit g/l
76.8	2	0***	350	750*

* VOC limit for "other sealants"

*** No information about exempt compounds. Set to zero

**3RD PARTY ACCREDITATION
CERTIFIRE CF 640
HAS BEEN REPLACED BY
UL 3RD PARTY ACCREDITATION
PLEASE **CLICK HERE** FOR CERTIFICATE
OR SCAN THE QR CODE:**



Installation

We have technical representatives who provide assistance in the selection and specification of the products on this site and should be consulted for exact installation and product suitability. Ensure an early engagement with ourselves, designers, main contractor and specialist installers before any installation. Other trades and/or manufacturers may need to be consulted. For in-depth information, specification and technical advice please call our Head Office on tel [01329 844 500](tel:01329844500) or email sales@astroflame.com

Maintenance

All interested parties, designer, specifier, main contractor and specialist installers should provide access to allow the fire stopping seals to be regularly inspected and maintained, as well as records kept of such maintenance at minimum periods of 12 months, as required by the Regulatory Reform Order, and repaired if necessary. Reference should be made to ASFP TGD 17 – Code of Practice for the Installation and Inspection of Fire Stopping.

Competency

It is vital that those entrusted to design or install a fire stopping product have the necessary levels of competence to undertake the task professionally and thoroughly. The level of competency required will be commensurate with the expected complexity of the building. All designers must eliminate, reduce or control foreseeable risks that may arise during installation, construction or maintenance when preparing or modifying designs. Clients should ensure that the principal designer and principal contractor carry out their duties under CDM regulations. The ASFP foundation course in passive fire protection provides essential knowledge as part of demonstrating competency and understanding in this key fire protection specialism.

Additional Notes

Please refer to the ETA/UL-EU sheet for fields of application for this product. For further information on installation requirements please refer to the manufacturer of the services and the wall/floor specification to ensure the compatibility of this product, if in doubt please contact the technical team with services and wall/floor specification on: tel [01329 844 500](tel:01329844500) or email sales@astroflame.com

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