UL-EU CERTIFICATE

| UL-EU-01167-CPF | | |
|-----------------|--|--|
| 1/45 | | |
| 2021-03-29 | | |
| | | |

Certificate Holder PFC Corofil Units 3 & 4 King Georges Industrial Estate, Davis Road, Chessington, KT9 1TT

Manufacturer A/008

Certified Product Type Product Trade Name Trademark Rating/Classification Fire Stop - Sealant PFC Corofil Acoustic Intumescent Sealant N/A See Appendix

Harmonised Technical Specifications

Expiry date

EAD 350454-00-1104, September 2017/ EAD 350141-00-1106, September 2017 / EN 13501-2 2031-03-28



Authorized Certification Decision Maker Chris Miles This is to certify that representative samples of the Certified Product listed above have been investigated by Underwriters Laboratories to the Standard(s) indicated on this Certificate, in accordance with the UL Global Services Agreement and the UL-EU Mark Service Terms and Conditions ("Agreement"). The Certificate Holder is entitled to use the UL-EU Mark for the Certified Product listed on the certificate and manufactured at the production site(s) listed, in accordance with the terms of the Agreement. Only those products bearing the UL-EU Mark for Europe should be considered as being covered by UL's UL-EU Mark Service. This Certificate shall remain valid through the Expiration date, unless a Standard identified on this Certificate is amended or withdrawn prior to that date or there is a non-compliance with the Agreement.



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This certificate relates to the use of PFC Corofil Acoustic Intumescent Sealant for fire stopping where there are joints in or between walls & floors or service penetrations through floors and walls. The detailed scope is given in pages 3 to 44 of this Certificate. This shows the thickness and acceptable dimensions, substrates and orientations required to provide fire resistance periods of up to 240 minutes for differing services and wall/floor constructions.

The product is certificated on the basis of:

- i) Inspection and surveillance of factory production control by UL
- ii) Fire resistance test data in accordance with EN 1366-3: 2009 and 1366-4: 2006
- iii) Classification in accordance with EN 13501-2
- iv) Durability and Servicability as defined in EAD 350454-00-1104 and EAD 350141-00-1106

The movement capability of PFC Corofil Acoustic Intumescent Sealant joint seals is restricted to \leq 7.5% unless specifically stated within the tables below

The durability class of PFC Corofil Acoustic Intumescent Sealant is Type X - Intended for use in conditions exposed to weathering and all lower classes



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| Product-type: Sealant | Intended use: Lir | near Joint & Gap Seal / Penetration Se |
|--|--|--|
| Assessment method | Essential characteristic | Product Performance |
| XXXX | BWR 2 Safety in case of fire | \times \times \times \times |
| EN 13501-1 | Reaction to fire | No performance determined |
| EN 13501-2 | Resistance to fire | See pages 6 - 44 |
| | BWR 3 Hygiene, health and environment | |
| Declaration of manufacturer & EN 16516 | Content, emission and/or release of dangerous substances | Use categories: IA2 Declaration of manufacturer |
| EN 1026:2000 | Air permeability (material property) | See page 4 |
| EAD 350141-00-1106, Annex C & EN 12390-8 | Water permeability (material property) |) No performance determined |
| | BWR 4 Safety in use | Va Andre |
| EOTA TR 001:2003 | Mechanical resistance and stability | No performance determined |
| EOTA TR 001:2003 | Resistance to impact/movement | No performance determined |
| EOTA TR 001:2003 ISO 11600 & EAD 350141-00-1106, Clause 2.2.13 | Adhesion | 7.5P* |
| EAD 350141-00-1106, Clause 2.2.12 | Durability | Туре Х |
| EAD 350141-00-1106, Clause 2.2.13 | Movement capacity | See pages 13, 14, 21, 22, 26 & 27 |
| EAD 350141-00-1106, Clause 2.2.14 | Cycling of perimeter seals for curtain wa | Ills No performance determined |
| EAD 350141-00-1106, Clause 2.2.15 | Compression set | No performance determined |
| EAD 350141-00-1106, Clause 2.2.16 | Linear expansion on setting | No performance determined |
| All MINT | BWR 5 Protection against noise | - VII- VII- VII |
| EN 10140-1,2,4,5/ EN ISO 717-1 | Airborne sound insulation | Rw(C;Ctr)= 63 (-1;-7) dB |
| В | WR 6 Energy economy and heat retentio | |
| EN 12664, EN 12667, EN 12939, EN ISO 8990, EN ISO 6946, EN ISO 10456 | Thermal properties | No performance determined |
| EN ISO 12572, EN 12086, EN ISO 10456 | Water vapour permeability | No performance determined |



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PFC Corofil Acoustic Intumescent Sealant: Air Permeability according to BS EN 1026

| Pressure (Pa) | Results under pos | sitive chamber pressure | Results under negative chamber pressure | | |
|---------------|-----------------------------|--|---|--|--|
| | Leakage (m ³ /h) | Leakage (m ³ /m ² / h) | Leakage (m ³ /h) | Leakage (m ³ /m ² / h) | |
| 50 | 0.0 | 0.0 | 0.0 | 0.0 | |
| 100 | 0.0 | 0.0 | 0.0 | 0.0 | |
| 150 | 0.0 | 0.0 | 0.1 | 2.8 | |
| 200 | 0.0 | 0.0 | 0.1 | 2.8 | |
| 250 | 0.0 | 0.0 | 0.1 | 2.8 | |
| 300 | 0.0 | 0.0 | 0.0 | 0.0 | |
| 450 | 0.1 | 2.8 | 0.1 | 2.8 | |
| 600 | 0.1 | 2.8 | 0.1 | 2.8 | |

| PFC Corofil Acoustic Intumescent Sealant: Analytical VOC Results | | | | | | | |
|--|--------------------------|-----------------------------|---|---------------|--|--|--|
| Solid content % mass | Water content, % mass | Exempt compounds, % mass | VOC less water less exempt compounds, g/l | VOC limit g/l | | | |
| 76.8 | 2** | 0*** | 350 | 750* | | | |

* VOC limit for other sealants

** Given by client

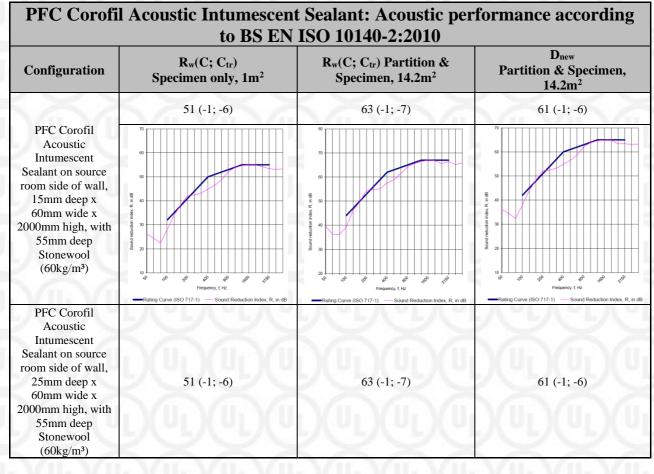
*** No information about exempt compounds. Set to zero.



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Min. 10

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Linear Joint Seals

Rigid Walls Minimum Thickness 100mm

Single sided linear joint in wall

Concrete or masonry walls ≥100mm with a density of ≥650kg/m³ Key \square 1. PFC Corofil Acoustic Intumescent Sealant Installed Either Side of Wall 3. 2. Backing Material 3. Rigid Wall :D 4 2. 1. D 4 4 \triangleright Substrate Depth (mm) **Backing Material** Classification E 120 - V - X - F - W 00 to W 50, 25 EI 60 - V - X - F - W 00 to W 50PE backing rod, glass wool, Concrete / masonry 2:1 ratio stone wool or ceramic wool E 120 - V - X - F - W 00 to W 50, (width:depth) &

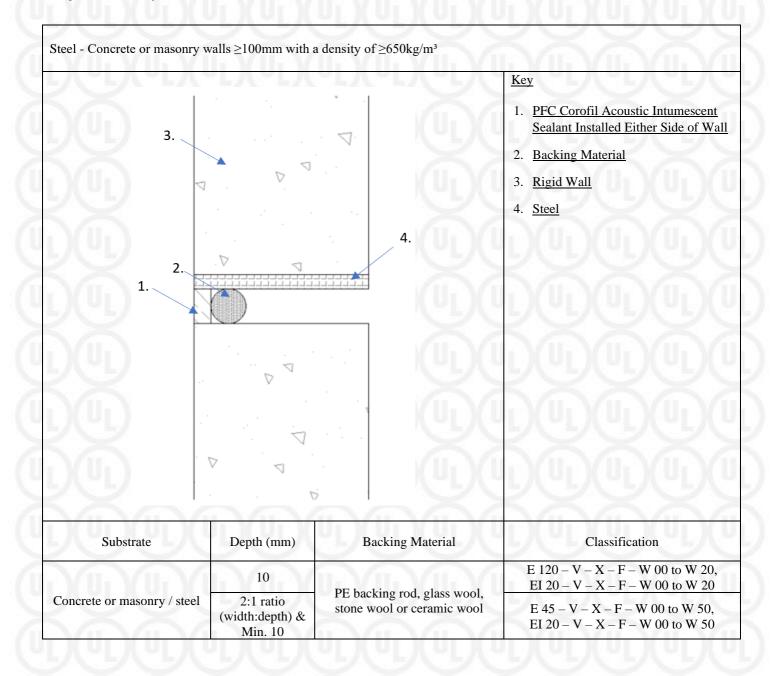
27-CP-F0855 Issue: 3.1



EI 45 - V - X - F - W 00 to W 50

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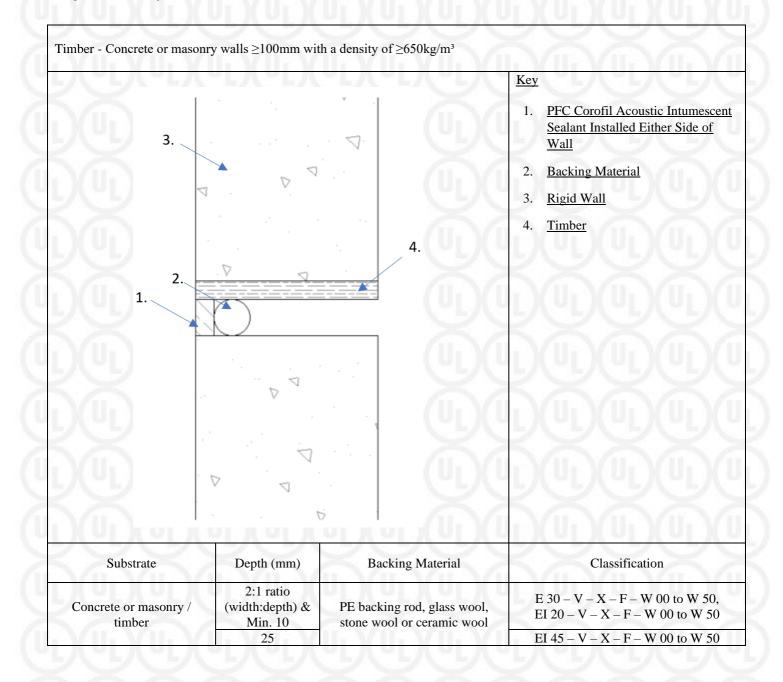
Single sided linear joint in steel faced wall





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Single sided linear joint in timber faced wall

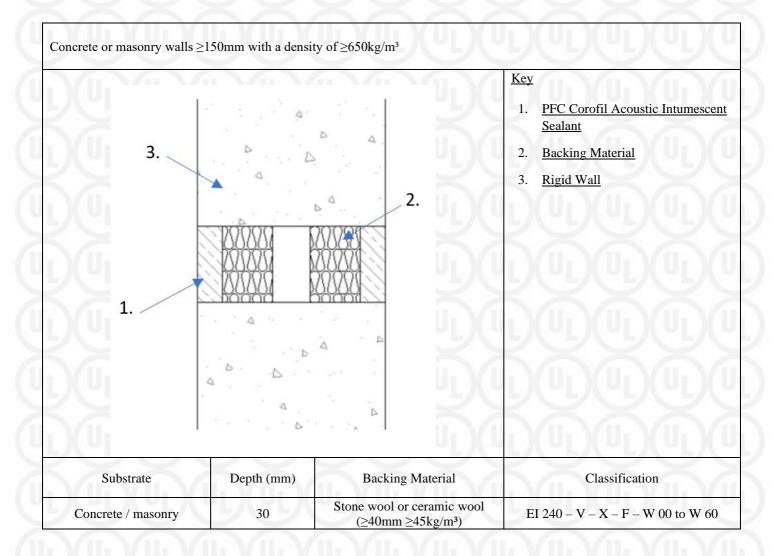




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Rigid Walls Minimum Thickness 150mm

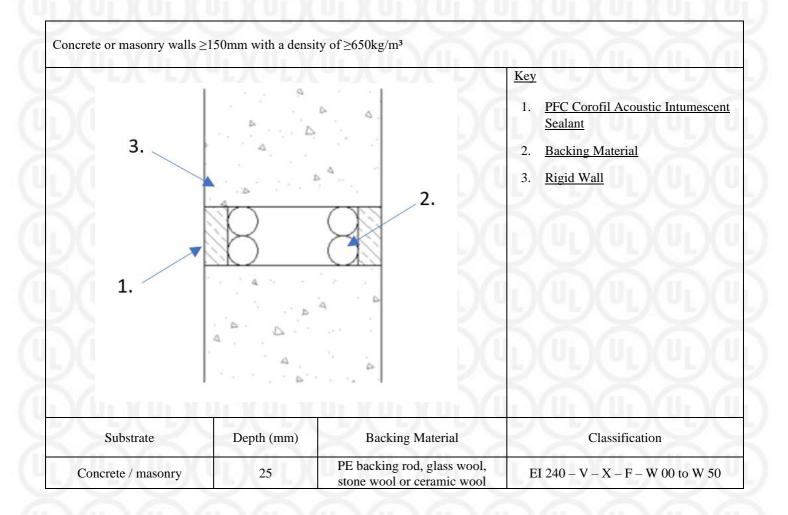
Double sided linear joint seal in wall





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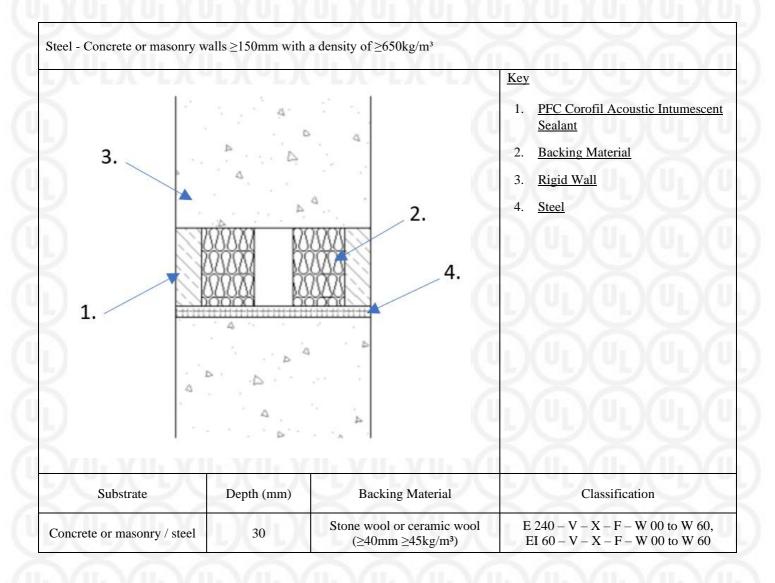
Double sided linear joint seal in wall





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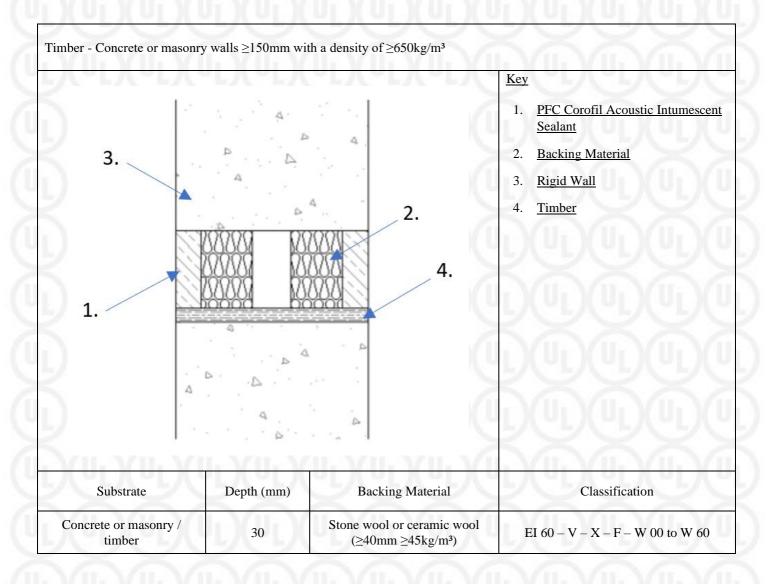
Double sided linear joint seal in steel faced wall





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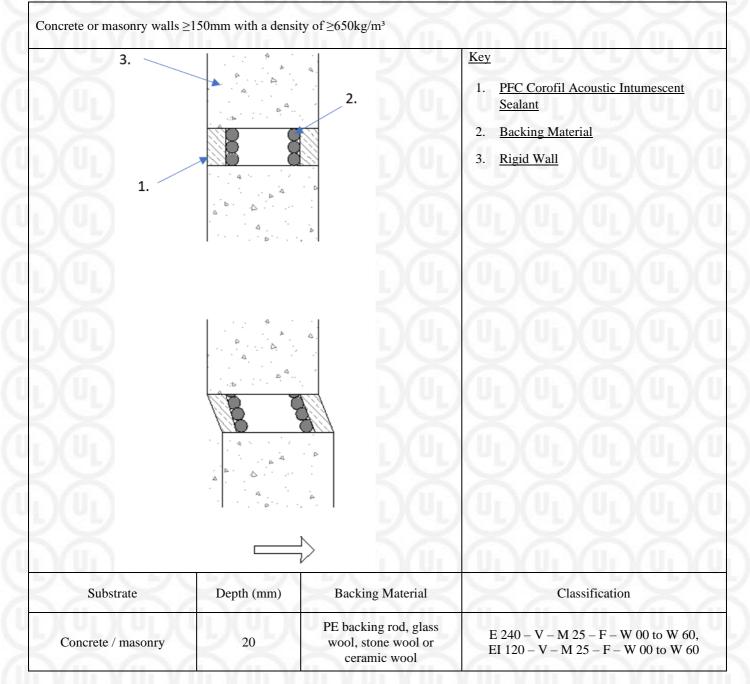
Double sided linear joint seal in timber faced wall





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Double sided seal in wall with movement





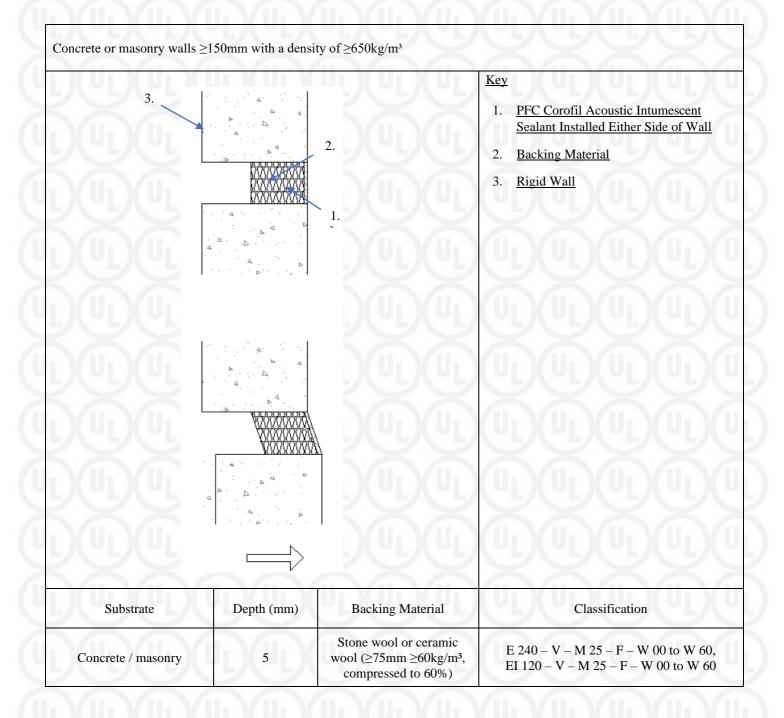
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Single sided linear joint in wall with movement



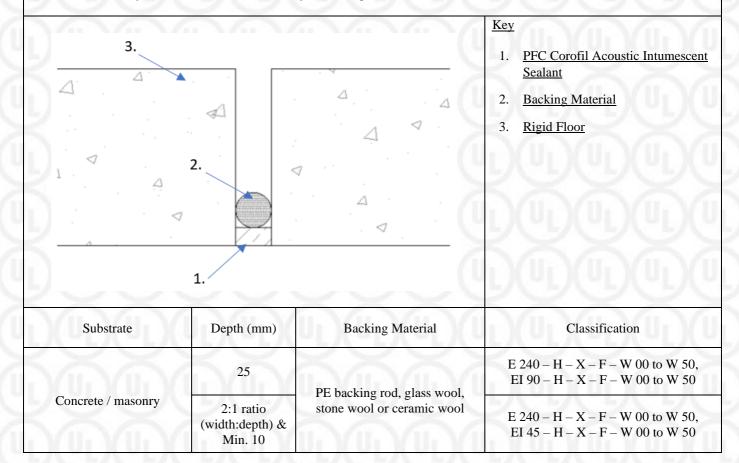
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Rigid Floors Minimum Thickness 150mm

Single sided linear joint in floor from under side

Concrete or masonry floors ≥150mm with a density of ≥650kg/m³





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Single sided linear joint in floor from top side

| | "LV"LV | ATAATAA A | Key |
|-----------|------------|-----------------------------|--|
| | 2. | | <u>PFC Corofil Acoustic Intumescen</u> <u>Sealant</u> <u>Backing Material</u> <u>Rigid Floor</u> |
| YuYuY | Depth (mm) | Backing Material | Classification |
| Substrate | | անան | |
| Substrate | 25 | PE backing rod, glass wool, | $ \begin{array}{c} E \ 240 - H - X - F - W \ 00 \ to \ W \ 50, \\ EI \ 90 - H - X - F - W \ 00 \ to \ W \ 50 \end{array} $ |



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Single sided linear joint in steel faced floor from underside

Steel - Concrete or masonry floors ≥150mm with a density of ≥650kg/m³ Key PFC Corofil Acoustic Intumescent 1. 4. Sealant 3. **Backing Material** 2. V 3. **Rigid Floor** 4. Steel D ∇ V \overline{V} 2. D D D 1. Substrate Depth (mm) **Backing Material** Classification E 240 - H - X - F - W 00 to W 50, 25 EI 90 - H - X - F - W 00 to W 50 PE backing rod, glass wool, Concrete or masonry / steel 2:1 ratio stone wool or ceramic wool E 120 - H - X - F - W 00 to W 50, (width:depth) & EI 30 - H - X - F - W 00 to W 50 Min. 10



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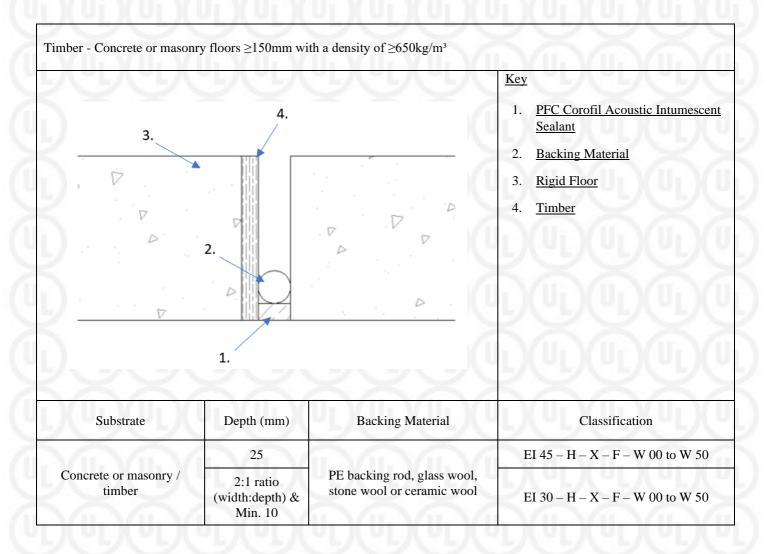
Single sided linear joint in steel faced floor from top side

Steel - Concrete or masonry floors ≥150mm with a density of ≥650kg/m³ Key PFC Corofil Acoustic Intumescent 1. 1. 4. Sealant 3. **Backing Material** 2. \triangleleft 3. **Rigid Floor** 4. Steel 2. 1 1 Δ 4 Substrate Depth (mm) **Backing Material** Classification E 240 - H - X - F - W 00 to W 50, 25 $EI \ 90 - H - X - F - W \ 00$ to $W \ 50$ PE backing rod, glass wool, Concrete or masonry / steel stone wool or ceramic wool 2:1 ratio E 120 - H - X - F - W 00 to W 50, (width:depth) & EI 30 - H - X - F - W 00 to W 50 Min. 10



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Single sided linear joint seal in timber faced floor from underside





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Single sided linear joint seal in timber faced floor from top side

Timber - Concrete or masonry floors ≥150mm with a density of ≥650kg/m³ Key PFC Corofil Acoustic Intumescent 1. 4. Sealant 1. 3. **Backing Material** 2. 3. **Rigid Floor** 1 <1 Timber 4. 2. 1 Δ 1 Δ 1 Substrate Depth (mm) **Backing Material** Classification EI 45 - H - X - F - W 00 to W 50 25 Concrete or masonry / PE backing rod, glass wool, 2:1 ratio stone wool or ceramic wool timber EI 30 - H - X - F - W 00 to W 50 (width:depth) & Min. 10



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Single sided linear joint in floor from top side with movement

Concrete or masonry floors ≥150mm with a density of ≥650kg/m³ Key 1. PFC Corofil Acoustic Intumescent 1. 2. 3. Sealant **Backing Material** 2. 3. **Rigid Floor** Depth (mm) Substrate **Backing Material** Classification Stone wool or ceramic wool $(\geq 100 \text{mm} \geq 60 \text{kg/m}^3,$ EI 240 – H – M 25 – F – W 00 to W 60 Concrete / masonry 5 compressed to 60%)

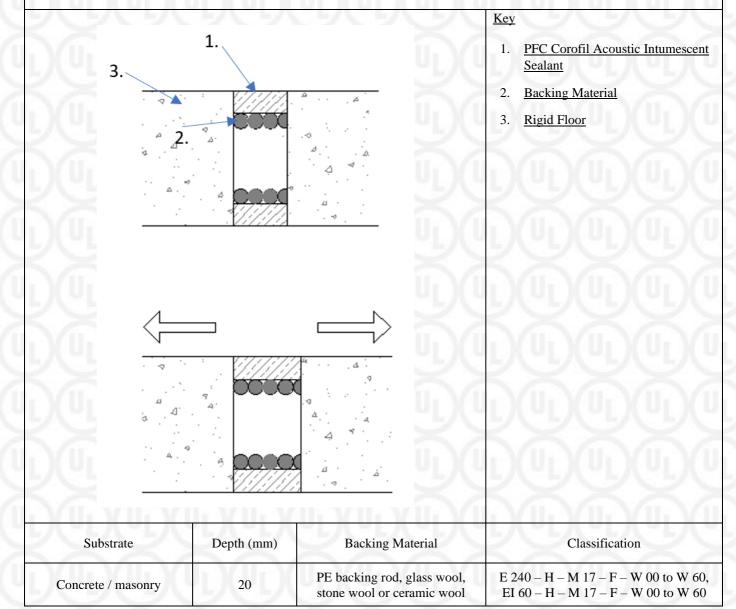


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Double sided linear joint seal in floor with movement

Concrete or masonry floors \geq 150mm with a density of \geq 650kg/m³



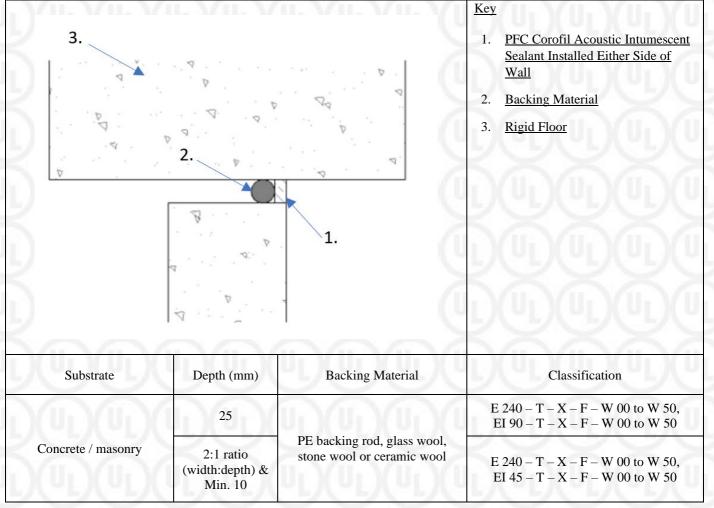


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Head of Wall Minimum Thickness 150mm

Single sided head of wall joint in floor

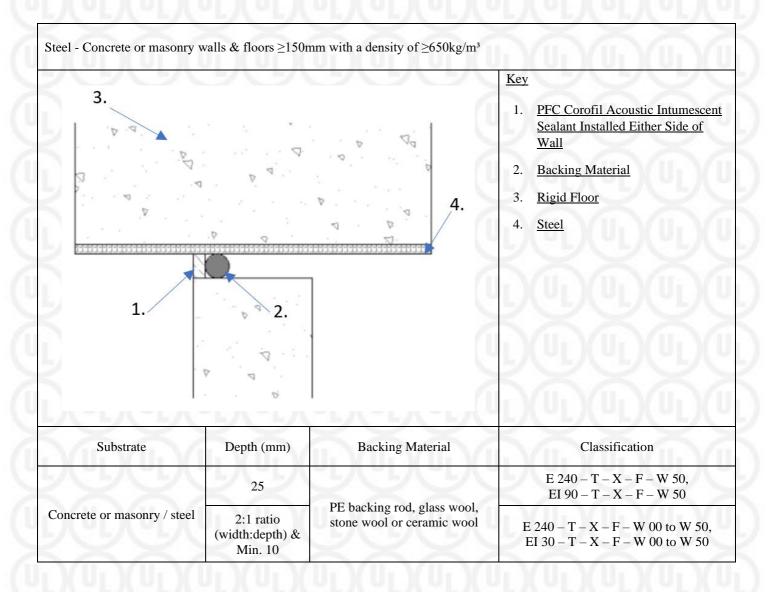
Concrete or masonry walls & floors \geq 150mm with a density of \geq 650kg/m³





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Single sided head of wall joint with steel face





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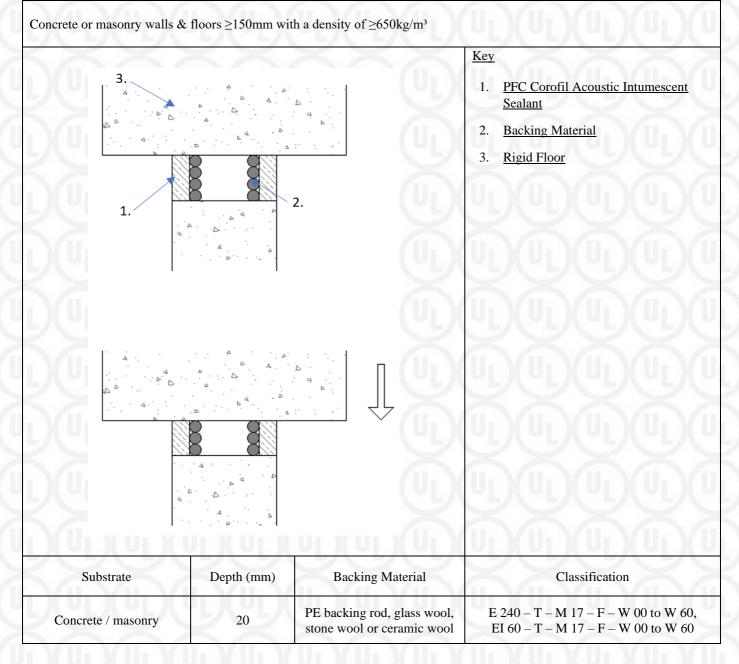
Single sided head of wall joint in timber face

Timber - Concrete or masonry walls & floors ≥150mm with a density of ≥650kg/m³ Key 3. PFC Corofil Acoustic Intumescent 1. Sealant Installed Either Side of Wall **Backing Material** 2. **Rigid Floor** 3. 4. 4. Timber 2. 1. τ Substrate Depth (mm) **Backing Material** Classification 25 $EI\,45-T-X-F-W\,00$ to $W\,50$ PE backing rod, glass wool, Concrete or masonry / 2:1 ratio timber stone wool or ceramic wool (width:depth) & EI 30 - T - X - F - W 00 to W 50Min. 10



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Double sided head of wall joint with movement





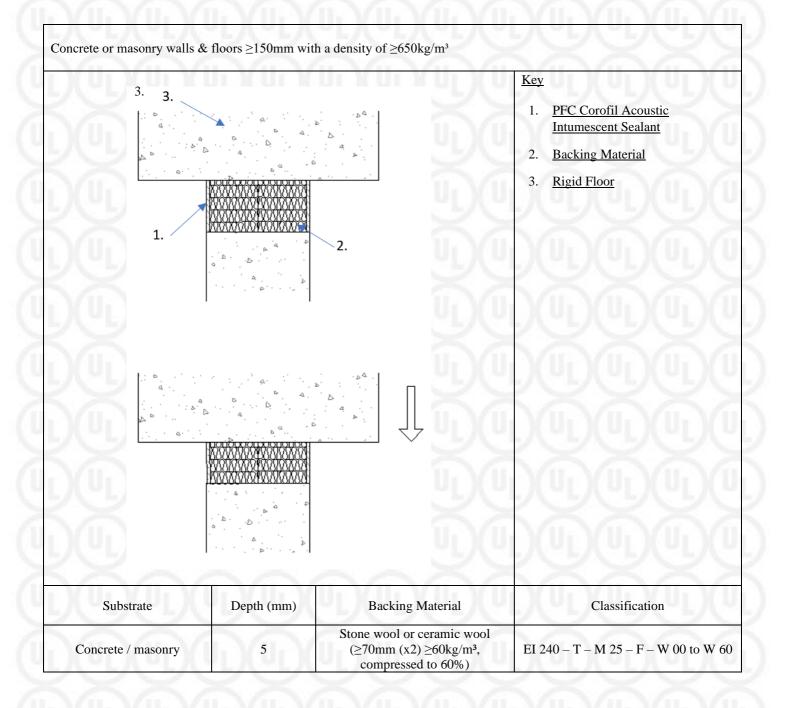
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Double sided head of wall joint with movement

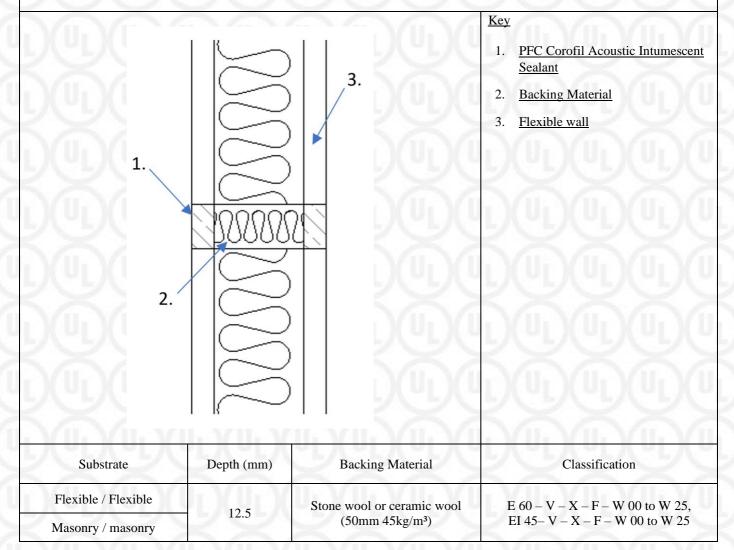


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Flexible or Rigid Walls Minimum Thickness 75mm

Double sided linear joint in wall

Flexible or Rigid Walls ≥75mm





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Flexible or Rigid Walls Minimum Thickness 120mm

Double sided linear joint in wall

Flexible or Rigid Walls ≥120mm Key PFC Corofil Acoustic Intumescent 1. Sealant 3. 2. **Backing Material** 3. Flexible Wall 1. 2. Depth (mm) Substrate **Backing Material** Classification Flexible / Flexible PE backing rod, glass wool, EI 120 - V - X - F - W 00 to W 2012.5 stone wool or ceramic wool Masonry / masonry

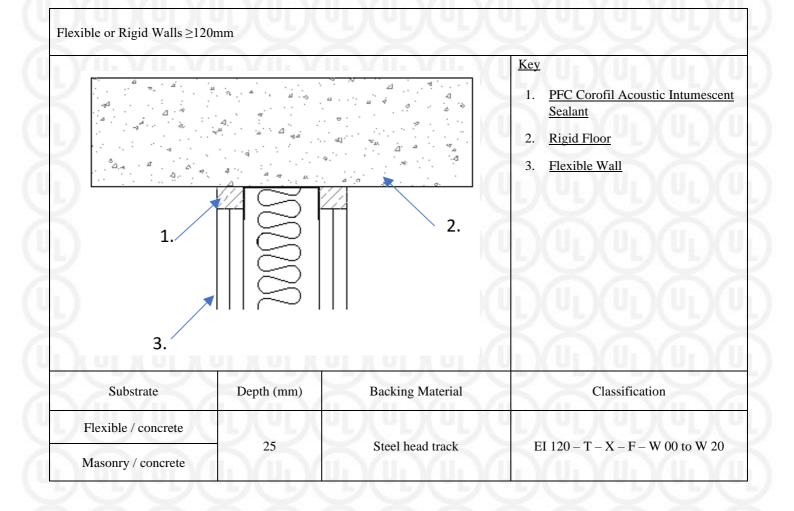


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Flexible Head of Walls Minimum Thickness 120mm

Double sided head of wall joint





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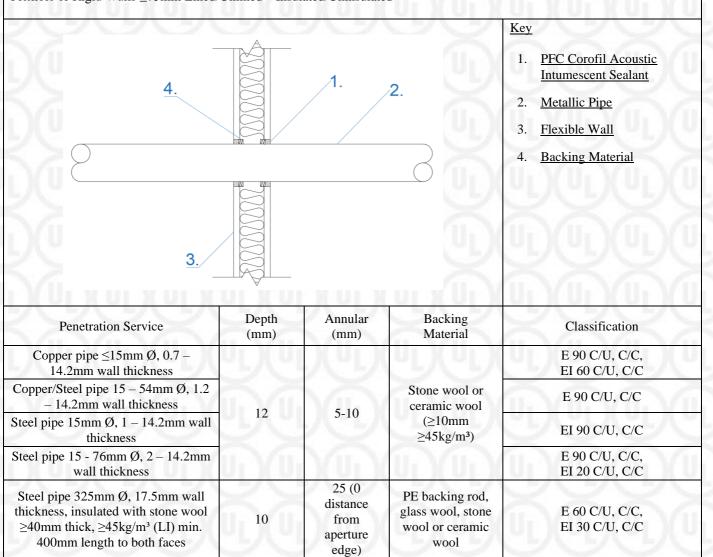
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Penetration Seals

Flexible or Rigid Walls Minimum Thickness 75mm

Metallic pipes

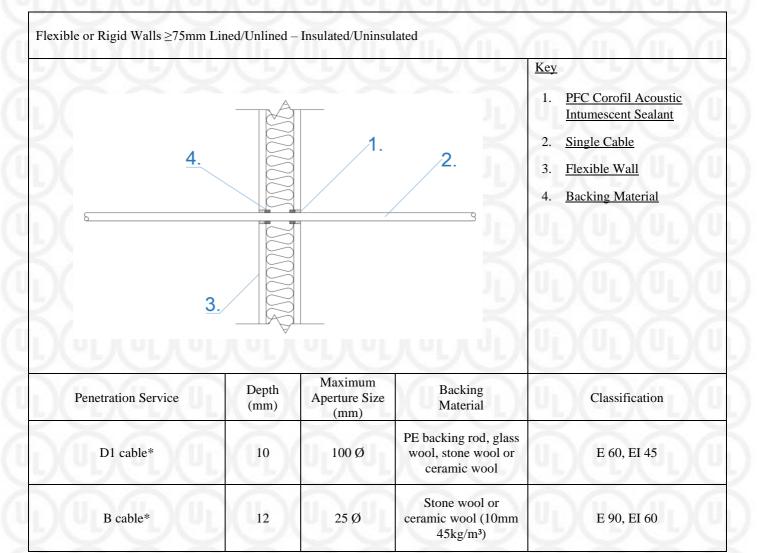
Flexible or Rigid Walls ≥75mm Lined/Unlined – Insulated/Uninsulated





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Single cables

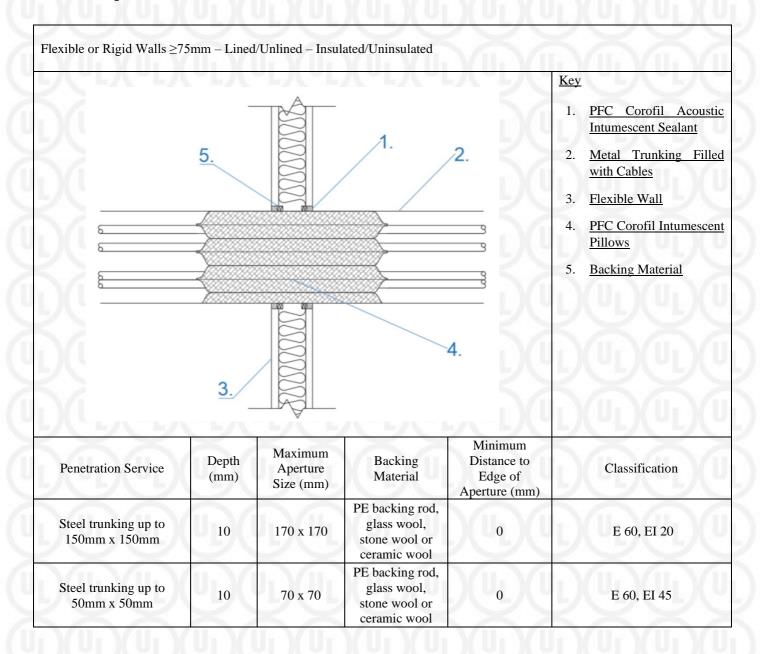


* As defined in EN 1366-3: 2009, Annex A



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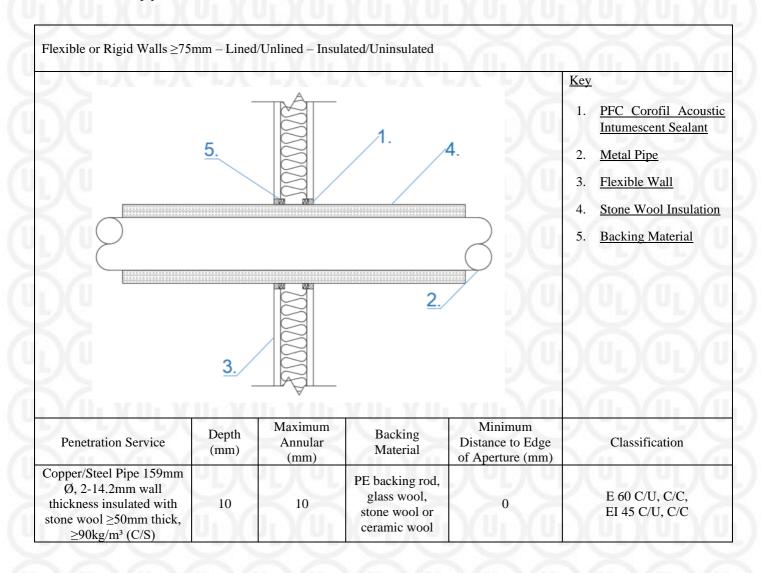
Cable trunking





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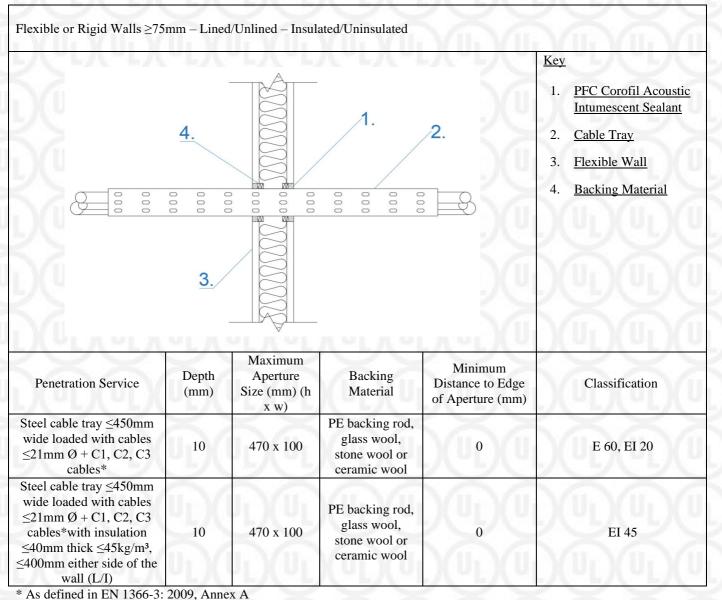
Insulated metallic pipes





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Cable trays



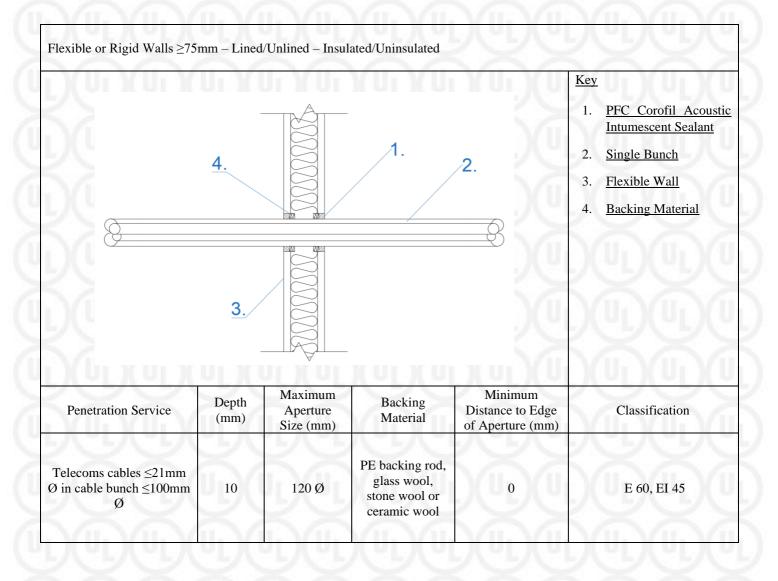


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Cable bunches





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Flexible or Rigid Walls Minimum Thickness 100mm

Metallic pipes

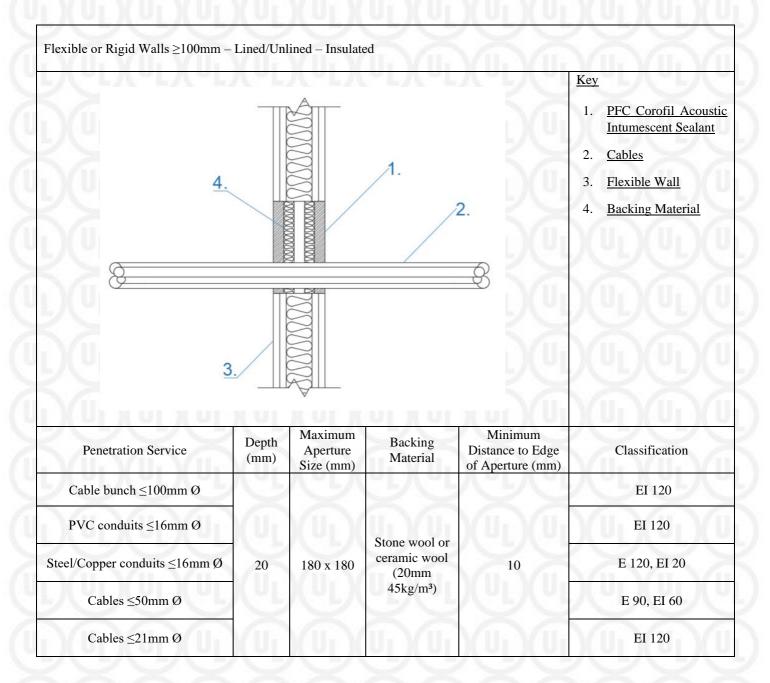
Flexible or Rigid Walls ≥100mm

| | 3. | | 1. | Key 1. PFC Corofil Acoustic Intumescent Sealant 2. Metallic Pipe 3. Flexible Wall 4. Backing Material |
|---|---------------------|-----------------------------|-----------------------------------|--|
| Penetration Service | Depth (mm) | Annular (mm) | Backing Material | Classification |
| Steel pipe 42mm Ø, 2.8 – 14.2mm wall thickness | .2mm wall thickness | PE backing rod, glass wool, | E 120 C/U, C/C, EI 45 C/U, C/C | |
| Steel pipe 42 – 114mm Ø, 3 – 14.2mm wall thickness | 25 | 10 | E 120 C/U, C/C, EI 20 C/U, C/C | |



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Cables and conduits



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Flexible or Rigid Walls Minimum Thickness 120mm

Metal pipes

Flexible or Rigid Walls ≥120mm – Lined/Unlined – Insulated Key 1. PFC Corofil Acoustic Intumescent Sealant 2. 4 2. Metal Pipe 3. Flexible Wall 4. **Backing Material** 3 Annular Depth Backing **Penetration Service** Space Classification Material (mm)(mm) Copper/Steel pipe 15-40mm Ø, 0.8 - 14.2mm E 120 C/U, C/C, wall thickness EI 15 C/U, C/C Copper/Steel pipe 40-159mm Ø, 1.8 -E 120 C/U, C/C 14.2mm wall thickness PE backing rod, Copper/Steel pipe 40mm Ø, 0.8 - 14.2mm glass wool, stone wall thickness insulated with 6 mm thick foil 10 E 120 C/U, C/C, 25 wool or ceramic faced ceramic insulation to both sides of the EI 90 C/U, C/C wool wall at 300mm (L/I) Copper/Steel pipe 40-159mm Ø, 1.8 -14.2mm wall thickness insulated with 6 mm E 120 C/U, C/C, thick foil faced ceramic insulation to both EI 20 C/U, C/C sides of the wall at 300mm (L/I)



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Cable trays

| Flexible or Rigid Walls ≥12 | 0mm – Line | d/Unlined – In | sulated |)(4)(4 | Key |
|---|---|---|---|---|----------------|
| | <u>PFC Corofil Acoustic</u> <u>Intumescent Sealant</u> <u>Cable Tray/Cables</u> <u>Flexible Wall</u> <u>Backing Material</u> | | | | |
| Penetration Service | Depth (mm) | Maximum Aperture Size (mm) (w x h) | Backing Material | Minimum Distance to Edge of Aperture (mm) | Classification |
| Steel cable tray ≤450mm wide loaded with cables ≤21mm Ø | 25 | 490 x 100 | Stone wool or ceramic wool (≥35mm ≥80kg/m ³) | 20 | E 120, EI 90 |
| C1, C2, D1 and D2 Cables* | 25 | 200 x 100 | PE backing rod, glass wool, stone wool or ceramic wool | 20 | E 90, EI 60 |

* As defined in EN 1366-3: 2009, Annex A



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Rigid walls Minimum Thickness 150mm

Metal pipes

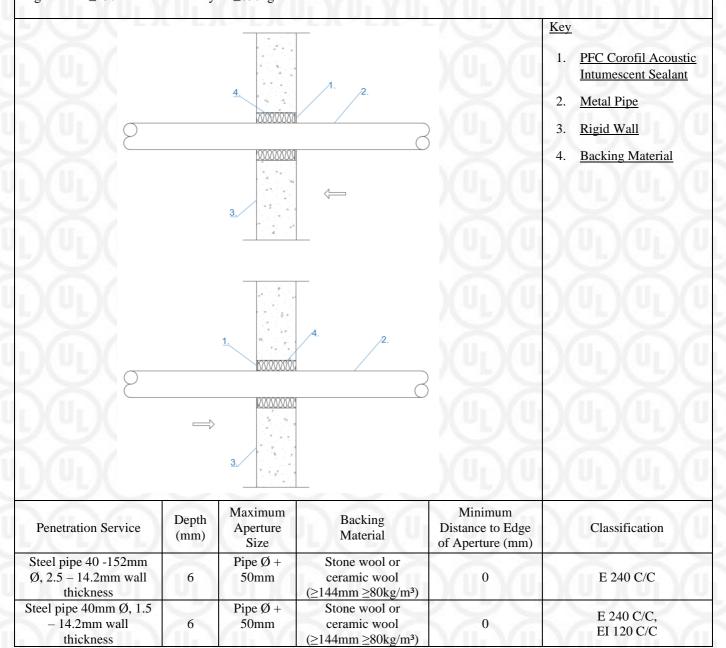
Rigid Walls \geq 150mm with a density of \geq 650kg/m³ Key 1. PFC Corofil Acoustic Intumescent Sealant Metal Pipe 2. 4 3. **Rigid Wall** 4. **Backing Material** RECERCE CERCECE CERCECE CERCE REERESTERESTERES 3 Maximum Minimum Depth Penetration Service Aperture **Backing Material** Distance to Edge Classification (mm) Size of Aperture (mm) Copper/Steel pipe 35 -PE backing rod, 159mm Ø, 2 – 14.2mm Pipe Ø + glass wool, stone EI 240 C/U, C/C wall thickness insulated 5 55mm 0 wool or ceramic with stone wool 50mm wool thick 100kg/m³ (C/I)



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Metal pipes with single sided access

Rigid Walls \geq 150mm with a density of \geq 650kg/m³





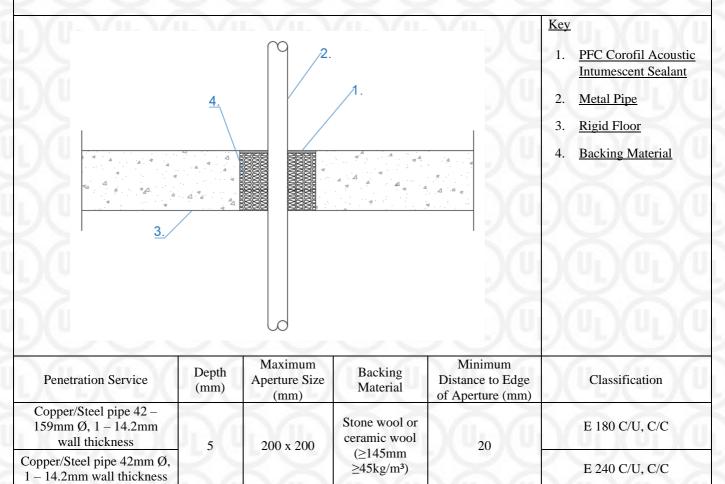
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Rigid Floors Minimum Thickness 150mm

Metal pipes

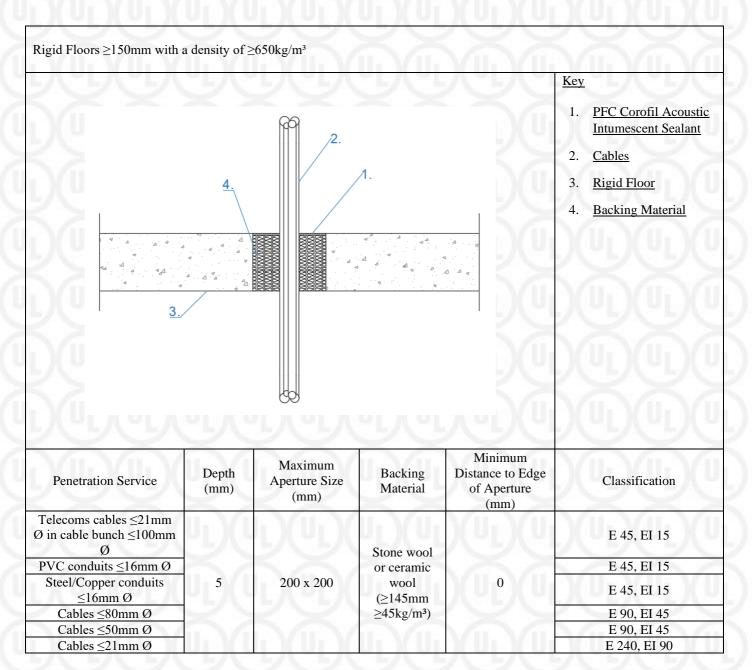
Rigid Floors \geq 150mm with a density of \geq 650kg/m³





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Cables





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The UL-EU Mark, as displayed below, shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.



The minimum height of the registered trademark symbol ® shall be 1 mm. When the overall diameter of the UL-EU Mark is less than 9.5 mm, the trademark symbol may be omitted if it is not legible to the naked eye.

The UL-EU Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Manufacturer's name or trademark and model number shall also appear elsewhere on the product.

All content shall be in accordance with the details provided on this UL-EU Certificate.

PROCUREMENT

The Production site may reproduce the Mark or obtain it from a UL authorized supplier. The list of UL authorized suppliers can be found on UL's online directory at www.ul.com.

