



ETA-Danmark A/S  
Göteborg Plads 1  
DK-2150 Nordhavn  
Tel. +45 72 24 59 00  
Internet  
[www.etadanmark.dk](http://www.etadanmark.dk)

Authorised and notified according  
to Article 29 of the Regulation  
(EU)  
No 305/2011 of the European  
Parliament and of the Council of 9  
March 2011



## European Technical Assessment ETA-20/1314 of 2021/01/01

### I General Part

**Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S**

**Trade name of the construction product:**

Nullifire FS709

**Product family to which the above construction product belongs:**

Fire Stopping and Sealing Product:  
• Penetration Seals

**Manufacturer:**

Tremco CPG UK Limited  
Torrington Avenue  
Coventry  
CV4 9TJ  
United Kingdom

**Manufacturing plant:**

A/017

**This European Technical Assessment contains:**

23 pages including 2 annexes which form an integral part of the document

**This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of:**

EAD 350454-00-1104 for Fire stopping and fire sealing products - Penetration seals, September 2017

**This version replaces:**

-

**Translations of this European Technical Assessment in other languages shall fully correspond to the original issued document and should be identified as such.**

**Communication of this European Technical Assessment, including transmission by electronic means, shall be in full. However, partial reproduction may be made, with the written consent of the issuing Technical Assessment Body. Any partial reproduction has to be identified as such.**

## I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

### 1 Technical description of the product

- 1) Nullifire FS709 is a high expansion intumescent sealant used to reinstate the fire resistance performance of wall and floor constructions where they have been provided with apertures for the penetration of single or multiple services.
- 2) The Nullifire FS709 is supplied in a 310 ml tube, and is then gunned into the aperture in the wall or floor, around the services, to the required depth and with the required backing material (as specified in Annex A).
- 3) Tremco Illbruck Limited have submitted a written declaration that Nullifire FS709 does not contain substances which have to be classified as dangerous according to Directive 67/548/EEC and Regulation (EC) No 1272/2008 and listed in the "Indicative list on dangerous substances" of the EGDS - taking into account the installation conditions of the construction product and the release scenarios resulting from there.

In addition to the specific clauses relating to dangerous substances contained in this European Technical Assessment, 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.

### 2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): ETAG 026-2.

Detailed information and data is given in Annex A.

- 1) The intended use of Nullifire FS709 is to reinstate the fire resistance performance of flexible wall, rigid wall and floor constructions where they are penetrated by various services.
- 2) The specific elements of construction that the system Nullifire FS709 may be used to provide a penetration seal in, are as follows:
  - a. Flexible walls: The wall must have a minimum thickness of 100 mm and comprise steel studs lined on both faces with minimum 2 layers of 12.5 mm thick boards.
  - b. Rigid walls: The wall must have a minimum thickness of 100 mm and comprise concrete, aerated concrete or masonry, with a minimum density of 650 kg/m<sup>3</sup>.
  - c. Rigid floors: The floor must have a minimum thickness of 150 mm and comprise aerated concrete or concrete with a minimum density of 650 kg/m<sup>3</sup>.

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

- 3) The System Nullifire DS709 may be used to provide a penetration seal with cables, cable trays, insulated metallic pipes and plastic pipes (for details see Annex A).
- 4) The total amount of cross sections of services (including insulation) shall not exceed 60% of the penetration area.
- 5) The provisions made in this European Technical Assessment are based on an assumed working life of the Nullifire FS709 of 10 years, provided that the conditions laid down in the product datasheet 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 or the Technical Assessment Body, 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.

- 6) Type Z<sub>1</sub>: intended for use at internal conditions with high humidity, excluding temperatures below 0°C

**3 Performance of the product and references to the methods used for its assessment**

Product-type: Sealant Pipe Closure		Intended use: Penetration Seal
	Essential characteristic	Performance
Safety in case of fire		
	Reaction to fire	Class E
	Resistance to fire	Annex A
Hygiene, health and environment		
	Air permeability (material property)	No performance assessed
	Water permeability (material property)	No performance assessed
	Release of dangerous substances	Use categories: IA3, S/W3 Declaration of manufacturer
Safety in use		
	Mechanical resistance and stability	No performance assessed
	Resistance to impact/movement	No performance assessed
	Adhesion	No performance assessed
Protection against noise		
	Airborne sound insulation	No performance assessed
Energy economy and heat retention		
	Thermal properties	No performance assessed
	Water vapour permeability	No performance assessed
General aspects relating to fitness for use		
	Durability and serviceability	Z <sub>1</sub>

**4 ASSESSMENT AND VERIFICATION OF CONSTANCY OF PERFORMANCE (HEREINAFTER AVCP) SYSTEM APPLIED, WITH REFERENCE TO ITS LEGAL BASE**

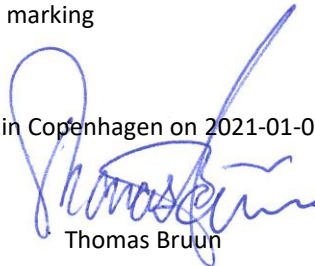
According to the decision 1999/454/EC – Commission Decision of date 22nd June 1999 on on the procedure for attesting the conformity of construction products pursuant to Article 20(2) of Council Directive 89/106/EEC as regards fire stopping, fire sealing and fire protective products, published in the Official Journal of the European Union (OJEU) L178/52 of 14/07/1999, see <http://eur-lex.europa.eu/JOIndex.do> of the European Commission<sup>1</sup>, as amended, the system(s) of assessment and verification of constancy of performance (see Annex V to Regulation (EU) No 305/2011) given in the following table(s) applies (apply).

Product(s)	Intended use(s)	Level(s) or class(es)	System(s)
Fire stopping and Fire Sealing Products	For fire compartmentation and/or fire protection or fire performance	Any	1

**5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD**

Technical details necessary for the implementation of the AVCP system are laid down in the control plan deposited at ETA-Danmark A/S prior to CE marking

Issued in Copenhagen on 2021-01-01 by



Thomas Bruun

Managing Director, ETA-Danmark

<sup>1</sup> Official Journal of the European Communities L178/52 of 14/7/1999

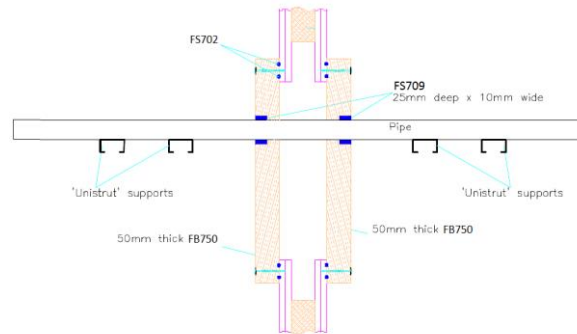
## ANNEX A – Resistance to Fire Classification – Nullifire FS709

### A.1 Flexible and Rigid wall constructions with wall thickness of minimum 130 mm

#### A.1.1 Pipe penetration seal with 2 x 50 mm thick Nullifire FB750, pattress fixed

**Penetration Seal:** Pipe penetrating through a 2 x 50 mm Nullifire FB750 pattress fixed (130 mm air gap) and overlapped onto the a flexible or rigid wall construction by 100 mm all around. The batts are fixed with 75 mm long screws, with 'penny' washers at 300 mm centres and Nullifire FS702 is applied to seal around on both faces at the interface between seal and supporting construction. Maximum Nullifire FB750 seal size of 1200mm wide by 1800mm high. Minimum separation between pipes of 95mm and 100 mm to the edges of the seal.

Construction details:



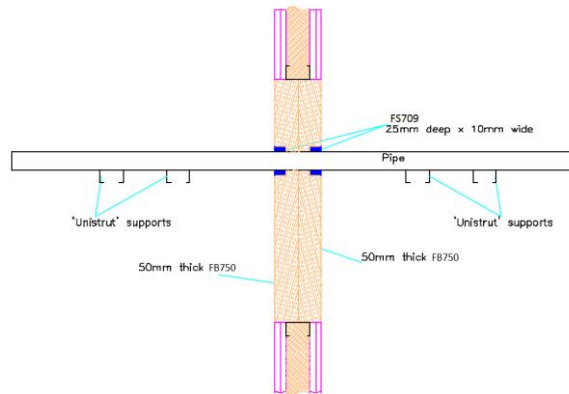
#### A.1.1.1 Double layer pattress penetration seal with pipes

Services	Seal components	Classification
PEX pipe, up to 28mm diameter / 2.6 mm wall	25 x 10 mm Nullifire FS709, flush to both faces	EI 90 U/C

### A.1.2 Pipe penetration seal with 2 x 50 mm thick Nullifire FB750, back to back

**Penetration Seal:** Pipes penetrating through a flexible or rigid wall construction. 2 x 50 mm Nullifire FB750 installed back to back. Nullifire FS702 is applied to seal at the interface between seal and supporting construction. Maximum seal size of 1200mm wide by 1800mm high. Minimum separation between pipes of 65mm and 100 mm to the edges of the seal.

Construction details:



#### A.1.2.1 Back to back penetration seal with pipes

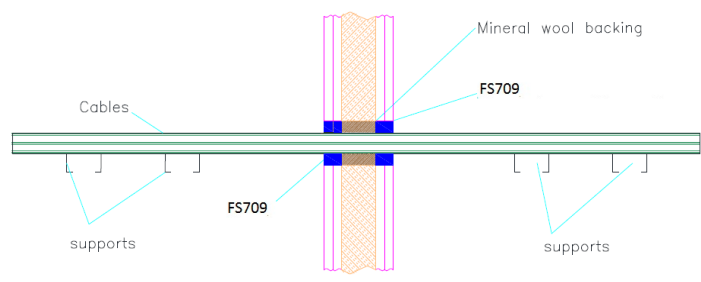
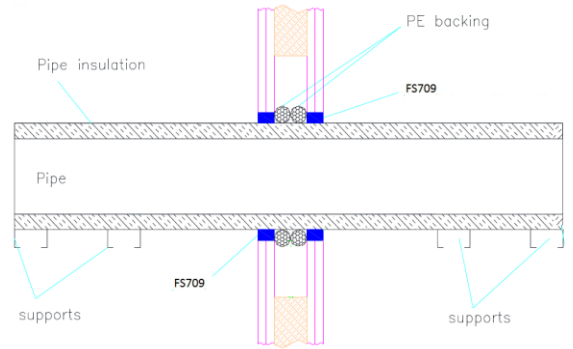
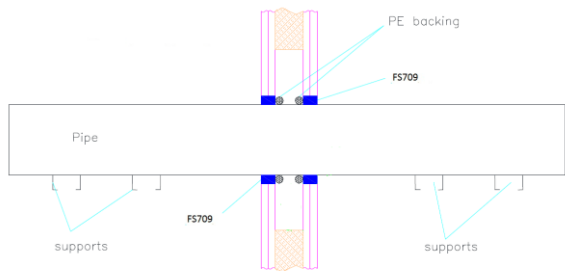
Services	Additional seal components	Classification
PEX pipe, up to 28mm diameter / 2.6 mm wall	25 x 10 mm Nullifire FS709, flush to both faces	EI 60 U/C

### A.1.3 Pipe and cable penetration seal in minimum 100 mm thick walls

**Penetration Seal:** Pipes penetrating through a flexible or rigid wall construction. Nullifire FS709 is applied to seal around the services on both faces at the interface between seal and supporting construction. Maximum seal size of 1200mm wide by 1800mm high. Minimum separation between pipes of 65mm and 100 mm to the edges of the seal.



Construction details:



**A.1.3.1 Penetration seal with cables and pipes**

Services	Opening size	Seal structure	Classification		
uPVC <sup>#</sup> pipe, 125 mm diameter / 4.8 – 7.4 mm wall	157 mm ∅	Nullifire FS709 16mm wide x 25mm deep on each face, backed with PE rod	<b>EI 120 U/C</b>		
PE <sup>§</sup> pipe, 90 mm diameter / 8.2 mm wall	115 mm ∅	Nullifire FS709 12.5mm wide x 25mm deep on each face, backed with PE rod			
ABS* pipe, 90 mm diameter / 6.0 mm wall					
uPVC <sup>#</sup> pipe, 40 mm diameter / 1.9-3.0 mm wall	60 mm ∅	Nullifire FS709 10mm wide x 25mm deep on each face, backed with PE rod	<b>E 120 C/U EI 90 C/U</b>		
Copper pipe, 15 mm diameter / 0.7mm wall	55 mm ∅	Nullifire FS709 20mm wide x 25mm deep on each face, backed with PE rod			
Copper pipe, 160 mm diameter / 2mm wall, insulated with 30 mm thick foil face glass wool CS	260 mm ∅				
PEX pipe, 28mm diameter / 2.0 mm wall	62 mm ∅				
uPVC <sup>#</sup> pipe, 125 mm diameter / 8.2 mm wall	165 mm ∅			<b>EI 120 U/C</b>	
uPVC <sup>#</sup> pipe, 40 mm diameter / 1.9 mm wall	80 mm ∅				
PE <sup>§</sup> pipe, 90 mm diameter / 8.2 mm wall	130 mm ∅				
ABS pipe, 40 mm diameter / 7.2 mm wall	80 mm ∅				
uPVC <sup>#</sup> pipe, 110 mm diameter / 3.2 mm wall	150 mm ∅				<b>E 120 U/C EI 90 U/C</b>
PE <sup>§</sup> pipe, 110 mm diameter / 6.3 mm wall					
PE <sup>§</sup> pipe, 40 mm diameter / 3.7 mm wall	80 mm ∅				<b>EI 120 U/C</b>
PE <sup>§</sup> pipe, 110 mm diameter / 6.6 mm wall	150 mm ∅				<b>E 120 U/C EI 90 U/C</b>
PE <sup>§</sup> pipe, 110 mm diameter / 3.4 mm wall					
ABS* pipe, 114 mm diameter / 6.4 mm wall					
ABS* pipe, 110 mm diameter / 11.2 mm wall				<b>E 120 U/C EI 60 U/C</b>	
PE <sup>§</sup> pipe, 63 mm diameter / 5.8 mm wall	600 x140 mm			Nullifire FS709, 25mm deep on each face, backed with 50 mm thick tightly packed stone wool (33 kg/m <sup>3</sup> )	<b>E 120 U/C EI 90 U/C</b>
Single electrical and telecoms cables up to 21mm diameter (including bundles up to 40 mm diameter)					<b>E 120 EI 90</b>
Pipe in pipe – Copper 15 mm diameter / 0.7 mm in PE <sup>§</sup> 63 mm diameter / 5.8 mm			<b>E 120 U/C EI 90 U/C</b>		
Steel cable trays and ladders up to 300 mm wide		<b>E 120 EI 90</b>			
Bundles of up to 10 electrical cables, up to 80 mm diameter		<b>E 120 EI 60</b>			
Non-sheathed cables up to 24 mm diameter		<b>E 120 EI 45</b>			

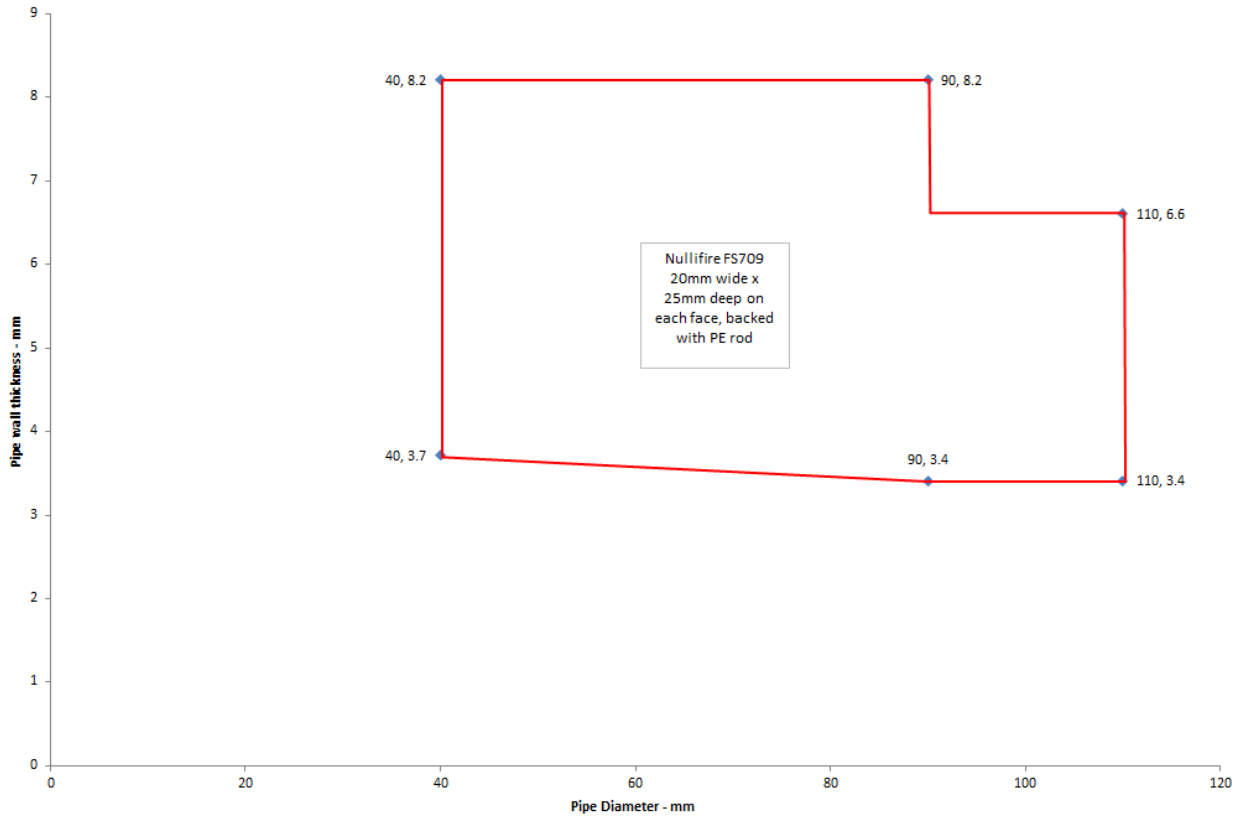
# EN1452-2

§ EN12201 DIN 8074/8075

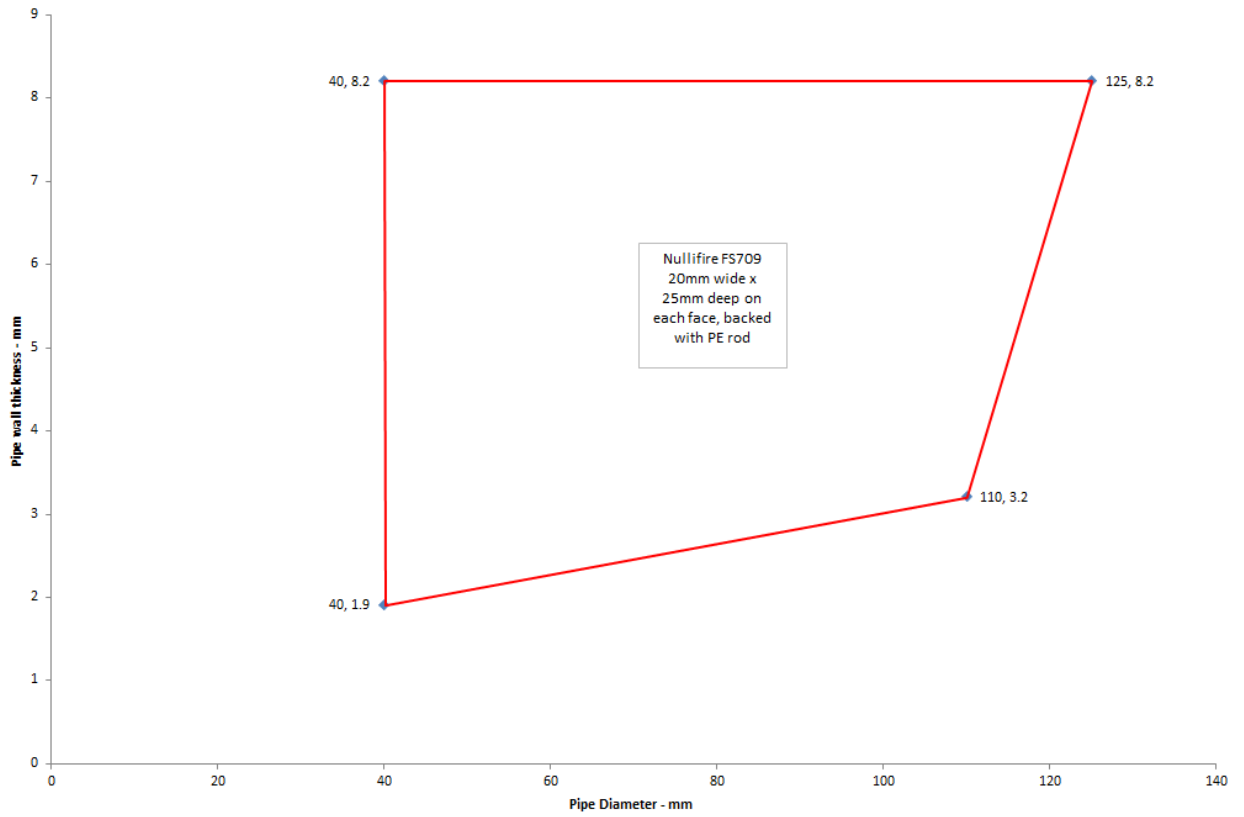
\* BS 5391-1:2006

CS – Continuous Sustained

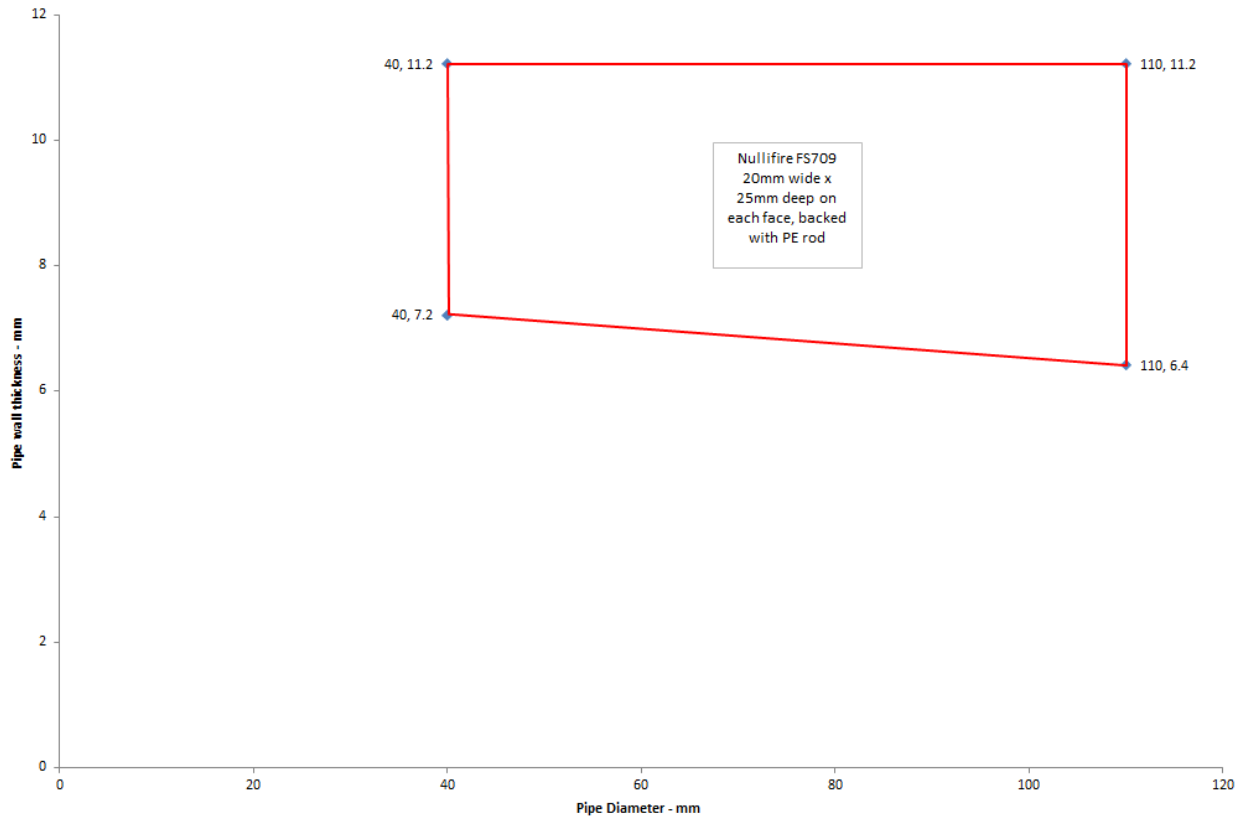
### PE pipes - E 120 U/C, EI 90 U/C



### uPVC pipes - E 120 U/C, EI 90 U/C



### ABS pipes - E 120 U/C, EI 60 U/C

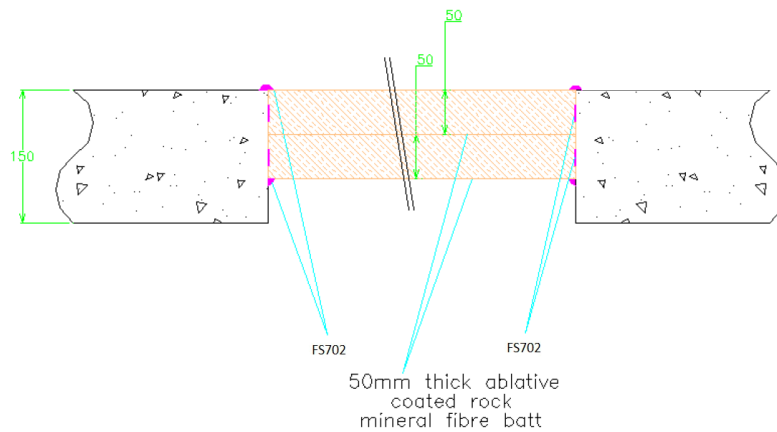
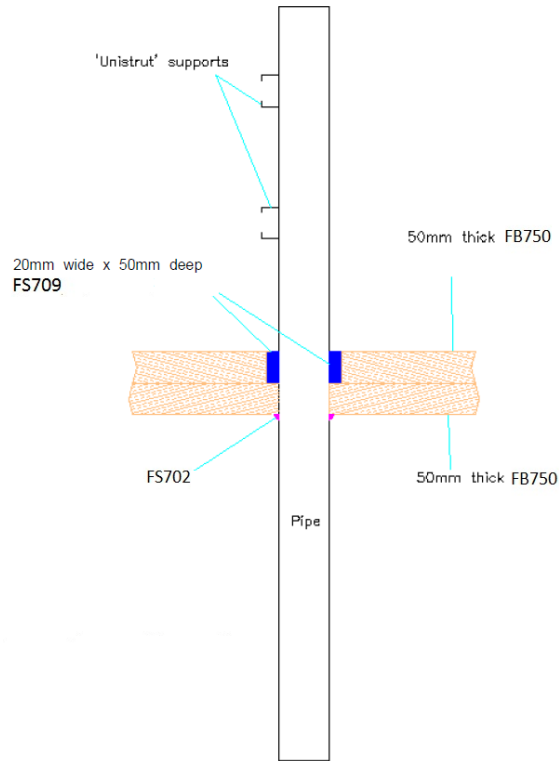


**A.2 Rigid floor constructions with floor thickness of minimum 150 mm**

**A.2.1 Pipe and cable penetration seal with 2 x 50 mm thick Nullifire FB750 flush to the top face and Nullifire FS709 with combustible pipes**

**Penetration Seal:** Pipes and cables penetrating through a 2 x 50 mm Nullifire FB750 flush to the top face to the top face of a rigid floor construction. Nullifire FS702 is applied to seal around the services insulation and on both faces at the interface between seal and supporting construction. Maximum seal opening size of 1100 x 1100 mm. Minimum separation between pipes of 145mm and 110 mm to the edges of the seal.

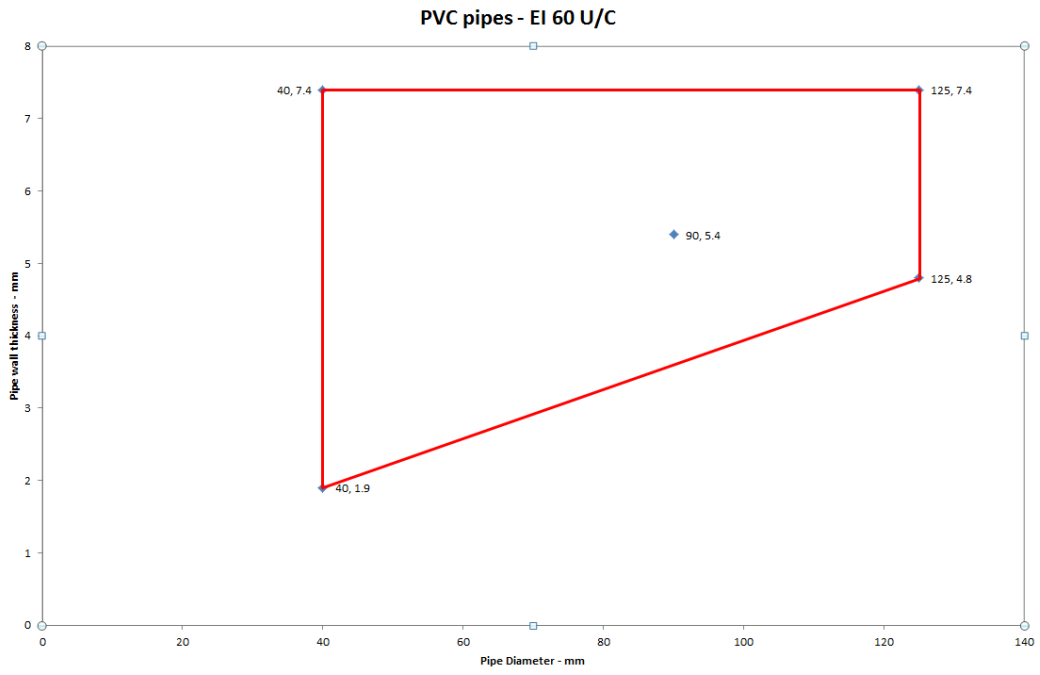
Construction details:



**A.2.1.1 Single layer penetration seal with cables**

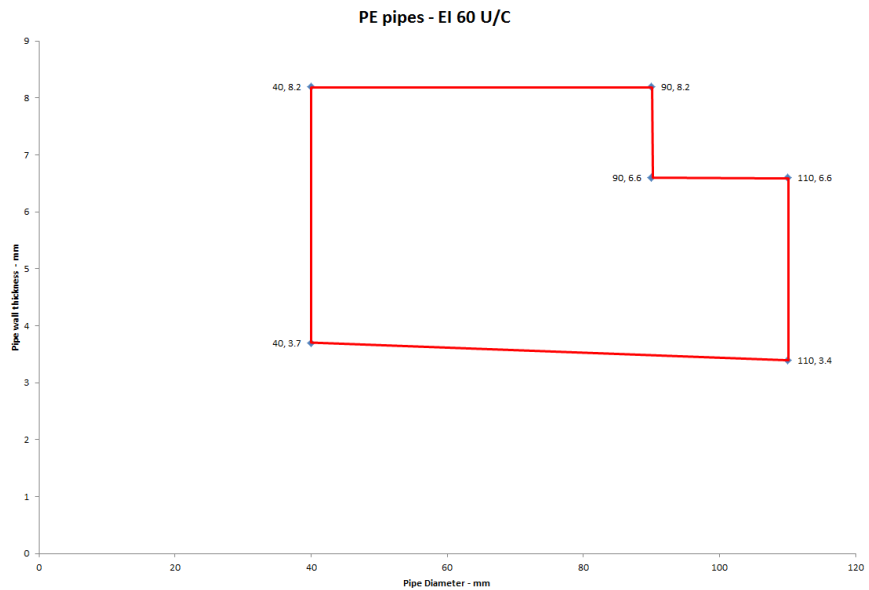
Services	Seal structure	Classification
PVC# pipe, up to 40 mm diameter / 1.9 mm wall thickness PVC# pipe, up to 90 mm diameter / 5.4 mm wall thickness PVC# pipe, up to 125 mm diameter / 4.8 - 7.4 mm wall thickness	20 mm wide x 50 mm deep Nullifire FS709 installed from the top face	<b>EI 60 U/C</b>

# EN1452-2



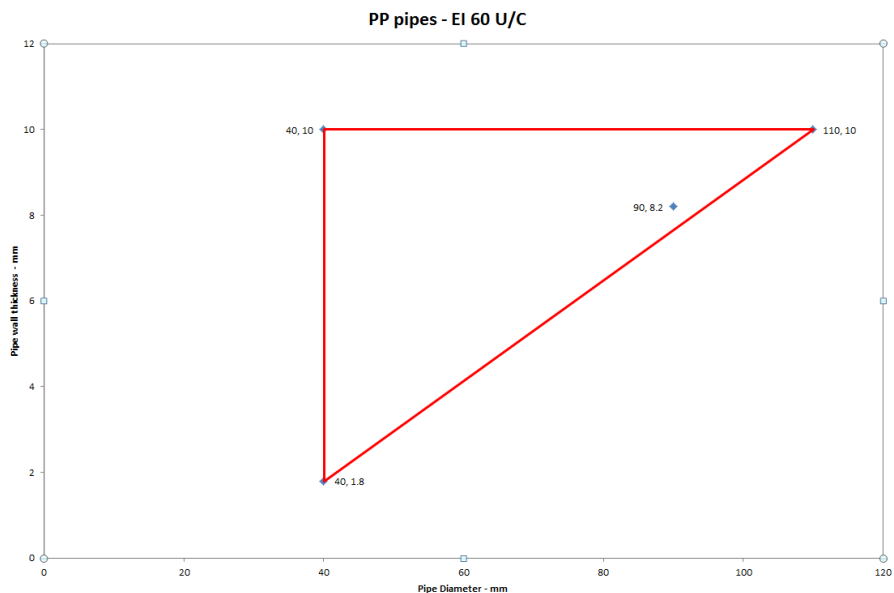
Services	Seal structure	Classification
PE <sup>§</sup> pipe, up to 40 mm diameter / 3.7 mm wall thickness PE <sup>§</sup> pipe, up to 90 mm diameter / 8.2 mm wall thickness PE <sup>§</sup> pipe, up to 110 mm diameter / 3.4 – 6.6 mm wall thickness	20 mm wide x 50 mm deep Nullifire FS709 installed from the top face	<b>EI 60 U/C</b>

§ EN12201 DIN 8074/8075



Services	Seal structure	Classification
PP <sup>@</sup> pipe, up to 40 mm diameter / 1.8 mm wall thickness PP <sup>@</sup> pipe, up to 90 mm diameter / 8.2 mm wall thickness PP <sup>@</sup> pipe, up to 110 mm diameter / 10 mm wall thickness	20 mm wide x 50 mm deep Nullifire FS709 installed from the top face	<b>EI 60 U/C</b>
PP <sup>@</sup> pipe, up to 110 mm diameter / 2.7 mm wall thickness		<b>E 30 U/C</b> <b>EI 20 U/C</b>

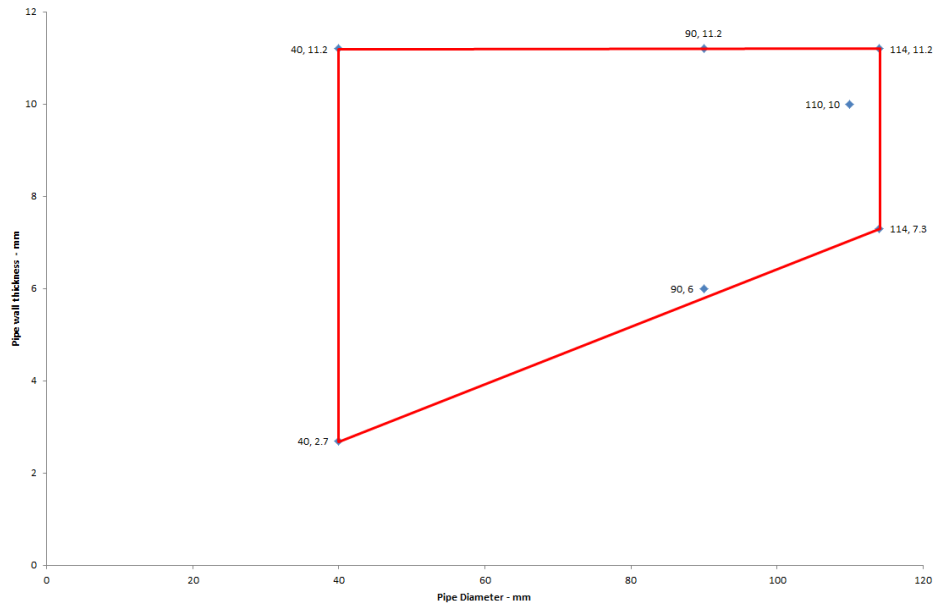
@ ISO 15494 DIN 8077/8078



Services	Seal structure	Classification
ABS* pipe, up to 40 mm diameter / 2.7 mm wall thickness ABS* pipe, up to 90 mm diameter / 6.0 - 11.2 mm wall thickness ABS* pipe, up to 114 mm diameter / 7.3 - 11.2 mm wall thickness	20 mm wide x 50 mm deep Nullifire FS709 installed from the top face	<b>EI 60 U/C</b>

\* BS 5391-1:2006

ABS pipes - EI 60 U/C

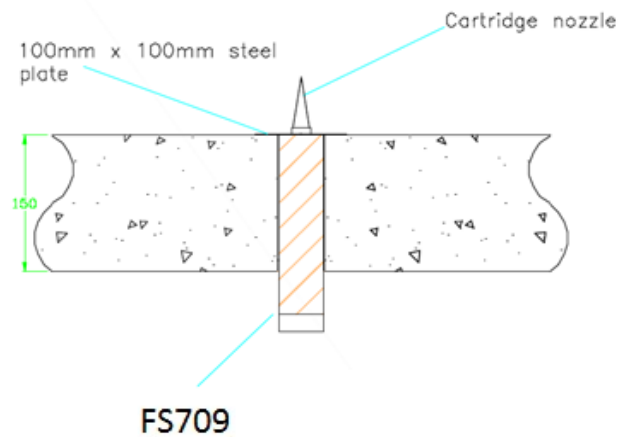




### A.3.1 Temporary penetration seal

**Penetration Seal:** Unopened tube of Nullifire FS709 inserted into circular aperture and retained from above via a steel plate screw fixed via the nozzle. Seal opening size of 50 mm.

Construction details:



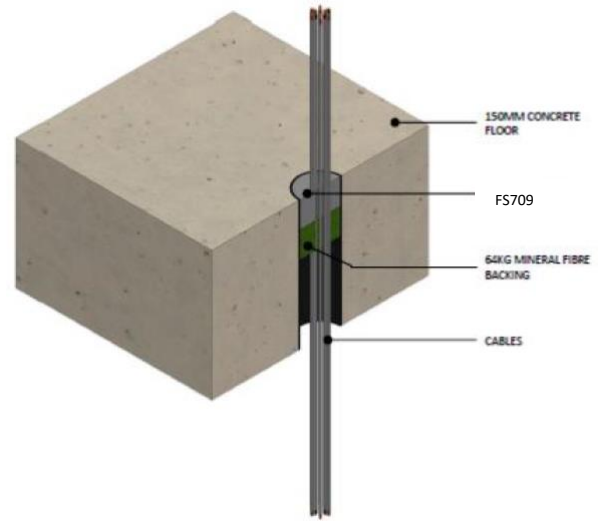
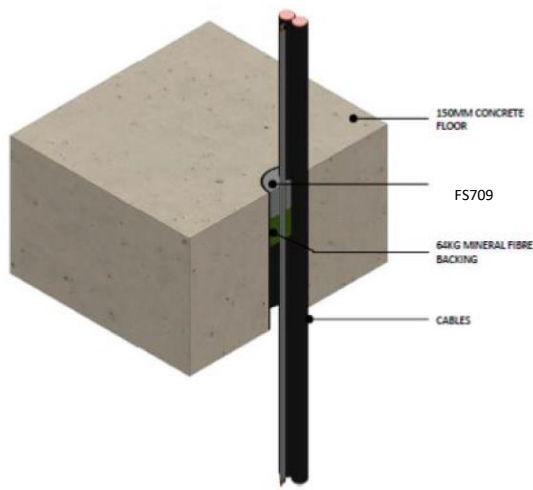
#### A.3.1.1 Single layer penetration seal with cables

Cartridge size	Additional seal component	Classification
215mm long x Ø48mm	Mastic cartridge held in position in aperture by steel plate 100mm x 100mm x 0.7mm thick with a Ø12mm hole in the centre, clamped between the cartridge and nozzle	<b>EI 120</b>

### A.3.2 Penetration seal with cables

**Penetration Seal:** Cables penetrating through a rigid floor construction. 30 mm depth Nullifire FS709 flush to the top face, backed by 30 mm depth stone wool insulation min. 64 kg/m<sup>3</sup> within a PVC sheath. Maximum seal opening size of 50 mm diameter.

Construction details:

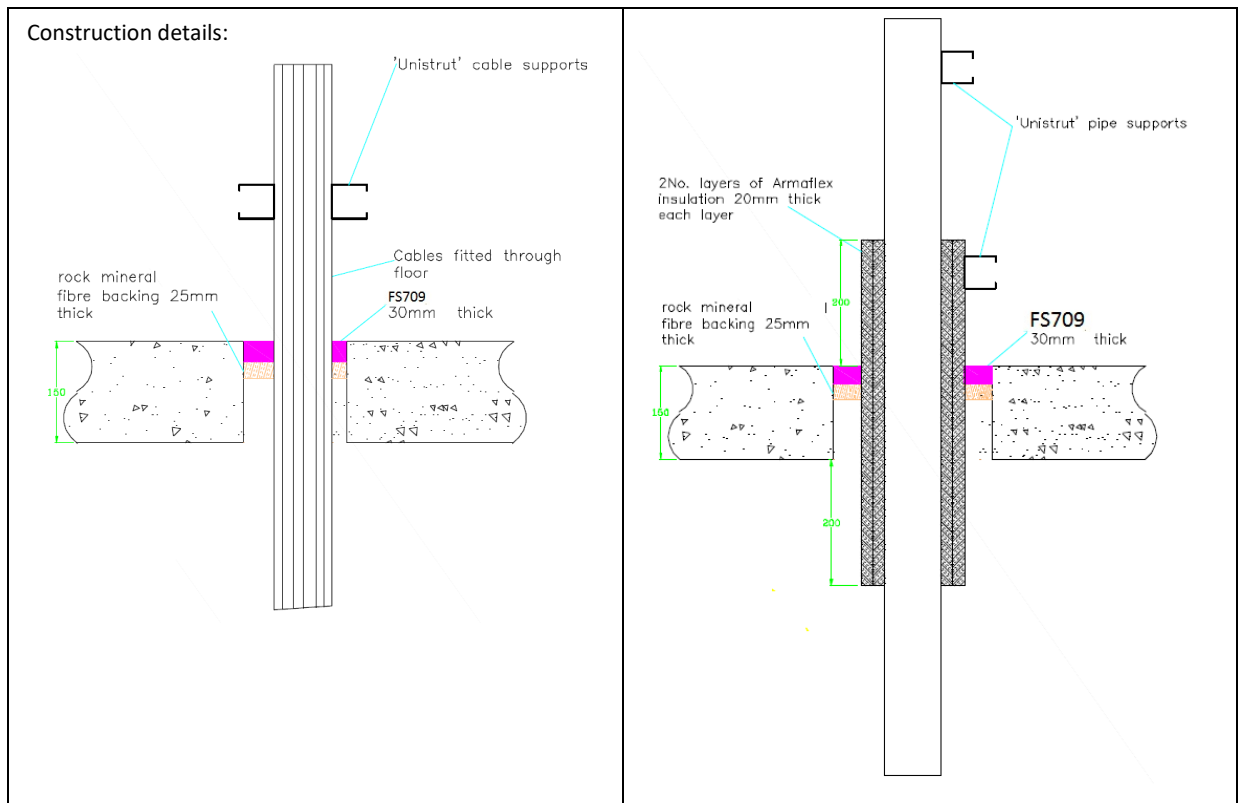


#### A.3.2.1 Single layer penetration seal with cables

Services	Seal construction (within PVC pipe/sheath)	Classification
50 mm / 2mm wall PVC sheath containing 2 x 19-23 mm diameter single sheath wires and a three core twin and earth cable	30 mm depth Nullifire FS709 flush to the top face, backed by 30 mm depth stone wool insulation min. 64 kg/m <sup>3</sup> .	<b>EI 120</b>
50 mm / 2mm wall PVC sheath containing 6 x three core twin and earth cable		

### A.3.3 Penetration seal with cables

**Penetration Seal:** Cables and metal pipes penetrating through a rigid floor construction. 30 mm depth Nullifire FS709 flush to the top face, backed by 25 mm stone wool insulation min. 64kg/m<sup>3</sup>.



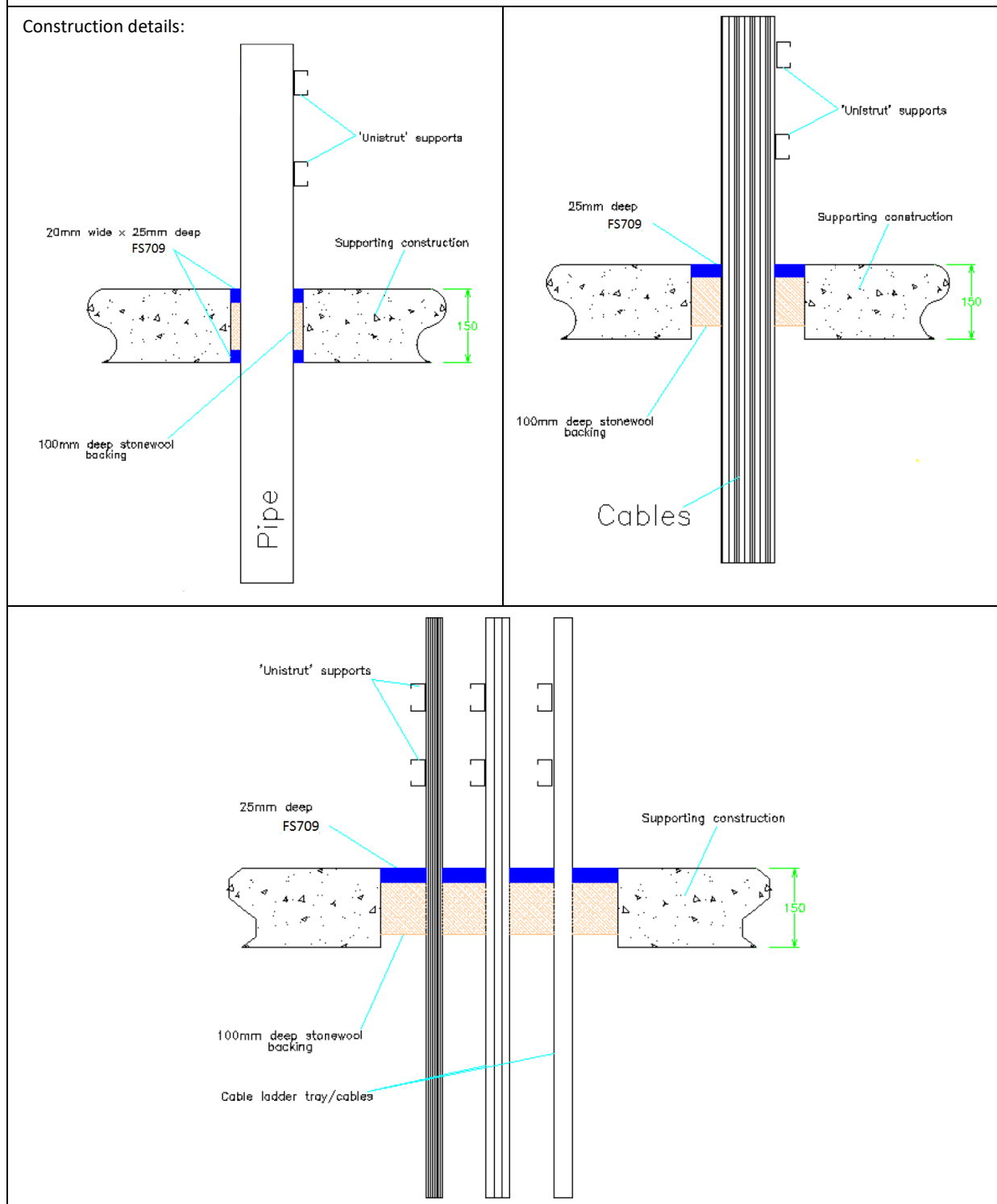
**A.3.3.1 Single layer penetration seal with cables**

Services	Opening size	Seal construction	Classification
20 No. 3-core twin and earth cables	80 mm diameter	30 mm depth Nullifire FS709 flush to the top face, backed by 25 mm stone wool insulation min. 64kg/m <sup>3</sup> .	<b>EI 120</b>
36 No. Cat 5 cables			
89 mm diameter / 5 mm wall steel pipe insulated with 2No. layers Armaflex insulation 450mm long x 20mm thick (each layer), LS	160 mm diameter		<b>E 90 U/C EI 60 U/C</b>

LS – Local Sustained

### A.3.4 Penetration seal with cables

**Penetration Seal:** Cables, metal pipes and plastic pipes penetrating through a rigid floor construction. Minimum separation between services and edges of seal 20 mm and minimum separation between adjacent services 30 mm.



#### A.3.4.1 Single and double layer penetration seal with cables and pipes

Services	Opening size	Seal construction	Classification
Electrical cables up to 21 mm diameter and steel cable trays and ladders up to 500 mm wide	600 x 600 mm	25 mm depth Nullifire FS709 flush to the top face, backed by 100 mm stone wool insulation min. 33kg/m <sup>3</sup> .	E 60 EI 45
Electrical cables up to 80 mm diameter, telecoms cables up to 21 mm diameter, including bundles up to 100 mm diameter and non-sheathed wires up to 24 mm diameter			E 60 EI 30

Electrical cables up to 21 mm diameter, telecoms cables up to 21 mm diameter and non-sheathed wires up to 24 mm diameter	50 x 50 mm		<b>EI 120</b>
Telecoms cables up to 21 mm diameter, including bundles up to 85 mm diameter	200 x 200 mm		<b>E 90 EI 45</b>
Up to 40 mm diameter / 3.7 mm wall PE pipe <sup>§</sup>	80 mm Ø	20 mm wide by 25 mm depth Nullifire FS709 flush to both faces, backed by 100 mm stone wool insulation min. 33kg/m <sup>3</sup>	<b>EI 120 U/C</b>
Up to 110 mm diameter / 3.2 mm wall uPVC pipe <sup>#</sup>	150 mm Ø		
Up to 110 mm diameter / 10.0 mm wall PP pipe <sup>@</sup>	150 mm Ø		
Up to 40 mm diameter / 1.9 mm wall uPVC pipe <sup>#</sup>	80 mm Ø		<b>EI 60 U/C</b>
Up to 110 mm diameter / 2.7-10.0 mm wall PP pipe <sup>@</sup>	150 mm Ø		<b>E 90 U/C EI 60 U/C</b>
Up to 110 mm diameter / 3.4 mm wall PP pipe <sup>@</sup>	150 mm Ø		
Up to 125 mm diameter / 7.4 -11.4 mm wall PE pipe <sup>§</sup>	165 mm Ø		<b>EI 240 U/C</b>
Up to 40 mm diameter / 1.9 mm wall PP pipe	80 mm Ø		<b>E 240 U/C EI 180 U/C</b>
Up to 110 mm diameter / 3.9 mm wall PE pipe <sup>§</sup>	150 mm Ø		<b>E 120 C/U EI 60 C/U</b>
Copper or steel pipe 159 mm diameter / 2 -14.2 mm wall insulated with 25 mm glass fibre 80 kg/m <sup>3</sup> CS	250 mm Ø		
Copper or steel pipe 15 mm diameter / 0.7 – 14.2 mm wall insulated with 30 mm glass fibre 80 kg/m <sup>3</sup> CS	115 mm Ø	<b>E 180 C/U EI 20 C/U</b>	

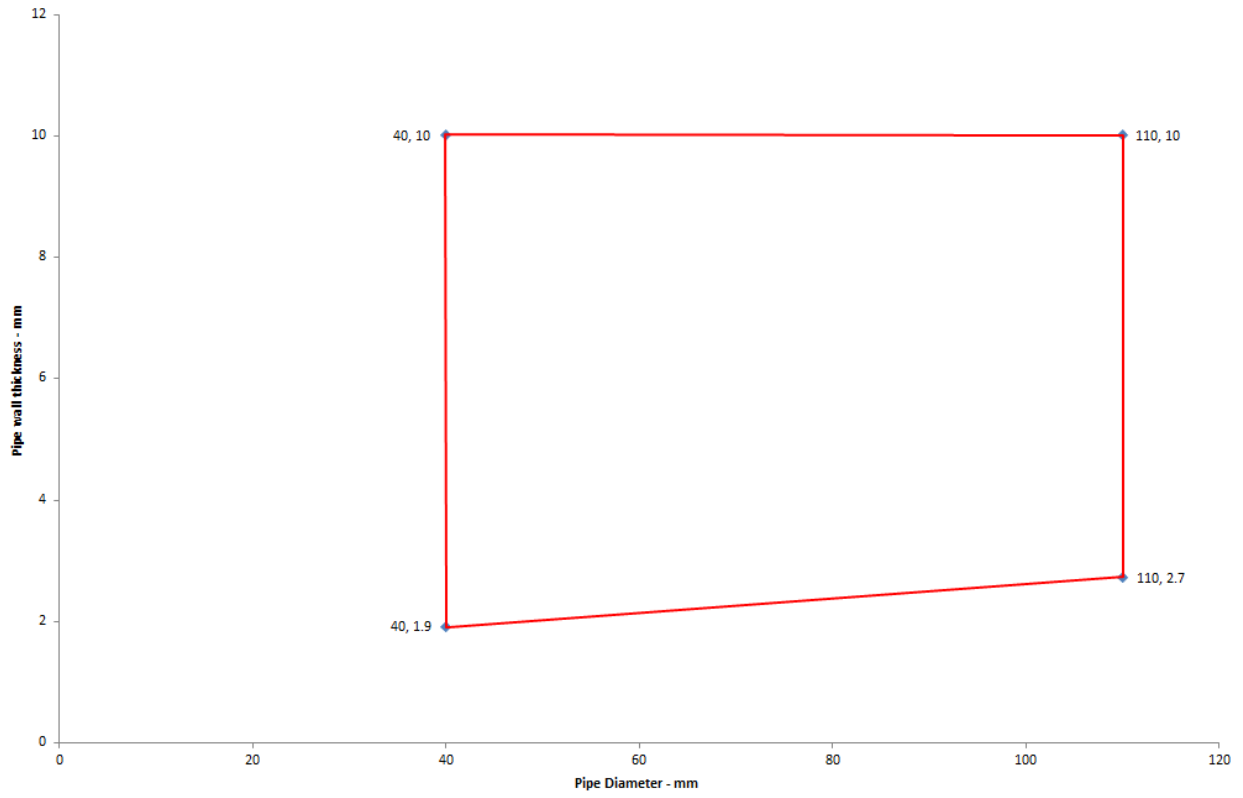
# EN1452-2

§ EN12201 DIN 8074/8075

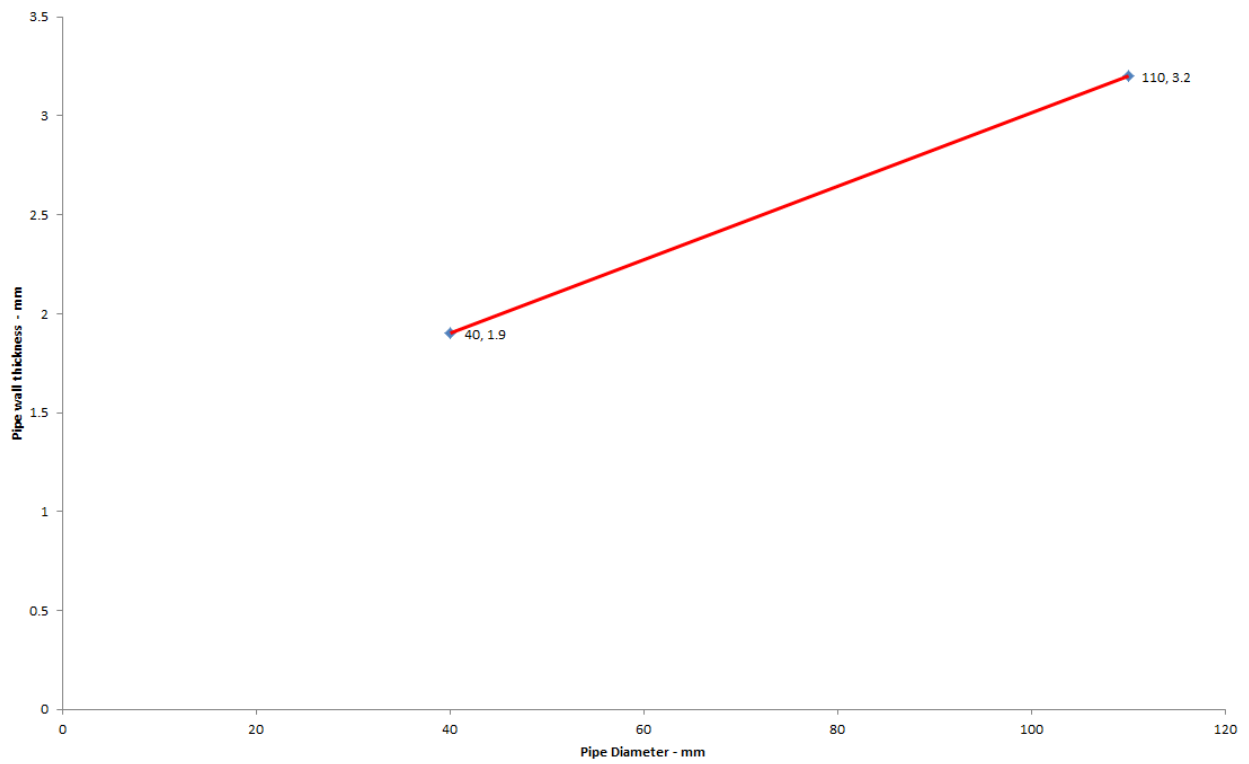
@ ISO 15494 DIN 8077/8078

CS – Continuous Sustained

### PP pipes - EI 60 U/C



### PVC pipes - EI 120 U/C



### PE pipes - E 90 U/C, EI 60 U/C

