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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

MEMBER OF EOTA

European Technical Assessment ETA-21/0193 of 2021/04/23

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:	Wrap Around Seal (WAS)/ Wrap Around Seal Strip (WASS)
Product family to which the above construction product belongs:	Fire Stopping and Sealing Product: • Penetration Seals
Manufacturer:	FireSeal AB Esbogatan 14 164 07 Kista Sweden
Manufacturing plant:	A/005
This European Technical Assessment contains:	13 pages including 1 annex 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, September 2017
This version replaces:	-

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I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 Technical description of the product

1) Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS) is a pipe closure device used to form penetration seals where combustible pipes, cables and metal pipes with insulation penetrate walls and floors.

2) The Wrap Around Seal (WAS) is supplied at the correct length to wrap around the diameter of the pipe. The Wrap Around Seal Strip (WASS) is supplied on a continuous roll, to be cut to the correct length during installation. The products are otherwise identical.

3) The applicant has submitted a written declaration that the product and/or constituents of the product contains no substances which have been 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.

4) The use catagory of Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS) in relation to BWR 4 (safety in use) is IA1, S/W3

2 Specification of the intended uses of the product in accordance with the applicable European Assessment Document (Hereinafter EAD): EAD 3504-00-1104

Detailed information and data is given in Annex A.

The intended use of system Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS) is to reinstate the fire resistance performance of flexible wall and rigid wall and floor constructions, where they are penetrated by services.

1) The specific elements of construction that the system Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS) may be used to provide a penetration seal in, are as follows:

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.
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/m3.
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/m3.

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

2) The system Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS) may be used to provide a penetration seal with specific supporting constructions and substrates (for details see Annex A).

3) The provisions made in this European Technical Assessment are based on an assumed working life of the Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS) of 10 years, provided that the conditions laid down in the manufacturers datasheet and instructions 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.

4) Type Y_2: intended for use at temperatures below 0°C, but with no exposure to rain nor UV. Includes lower use categories.

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

Product-type: Pipe Wrap		Intended use: Penetration Seal
	Basic Requirement	Performance
BWR 1 Mechanical resistance and stability		
	None	Not relevant
BWR 2 Safety in case of fire		
	Reaction to fire	No performance assessed
	Resistance to fire	Annex A
BWR 3 Hygiene, health and environment		
	Air permeability (material property)	No performance assessed
	Water permeability (material property)	No performance assessed
	Release of dangerous substances	Use categories: IA1, S/W3 Declaration of manufacturer
BWR 4 Safety in use		
	Mechanical resistance and stability	No performance assessed
	Resistance to impact/movement	No performance assessed
	Adhesion	No performance assessed
BWR 5 Protection against noise		
	Airborne sound insulation	No performance assessed
BWR 6 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	Y_2

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[1], 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 2021-04-23 by

Thomas Bruun

Managing Director, ETA-Danmark

[1] Official Journal of the European Communities L178/52 of 14/7/1999

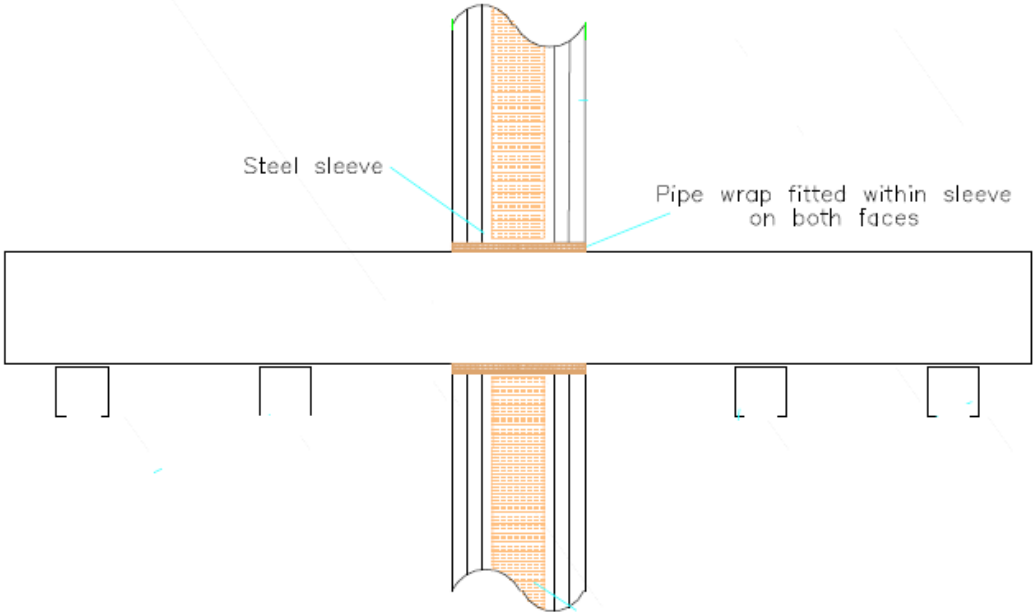
ANNEX A – Resistance to Fire Classification – Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS)

A.1 Flexible or rigid wall constructions with wall thickness of minimum 100 mm

A.1.1 Penetration seals, in drywalls and concrete/masonry walls

Penetration Seal: Insulated metal and combustible pipes and telecoms cables fitted with Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS), in a steel sleeve, to both sides of the wall.

Construction details:



A.1.1.1

Services	Wrap size	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 40 mm, wall thickness 2 mm	50 x 1.8 mm	**E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C**
Diameter 55 mm, wall thickness 2 mm	50 x 1.8 mm	
Diameter 82 mm, wall thickness 3.7-6.6 mm	50 x 3.6 mm	**EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C**
Diameter 110 mm, wall thickness 3.7-6.6 mm		
Diameter 82 mm, wall thickness 6.6 mm		**E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C**
Diameter 110 mm, wall thickness 6.6 mm		
Diameter 125 mm, wall thickness 6.6 mm		
Diameter 160 mm, wall thickness 9.5 mm	50 x 7.2 mm	**EI 90 U/U, EI 90 C/U, EI 90 U/C, EI 90 C/C**
Diameter 200 mm, wall thickness 6.2 mm	50 x 12.6 mm	
Copper with 19 mm thick Armaflex insulation		
Diameter 54 mm, wall thickness 0.8-14.2 mm	50 x 3.6 mm	**EI 60 C/U**
Telecoms cables up to 21 mm diameter in bundles up to 100 mm diameter^		
Up to 21 mm diameter in bundles up to 100 mm diameter^	50 x 3.6 mm	**E 120, EI 30**
Up to 21 mm diameter in bundles up to 100mm diameter^ wrapped with 300 mm long Insulwrap material[$]		**E 120, EI 90**

[$] Only required on non-fire risk side or both sides if fires risk side is unknown

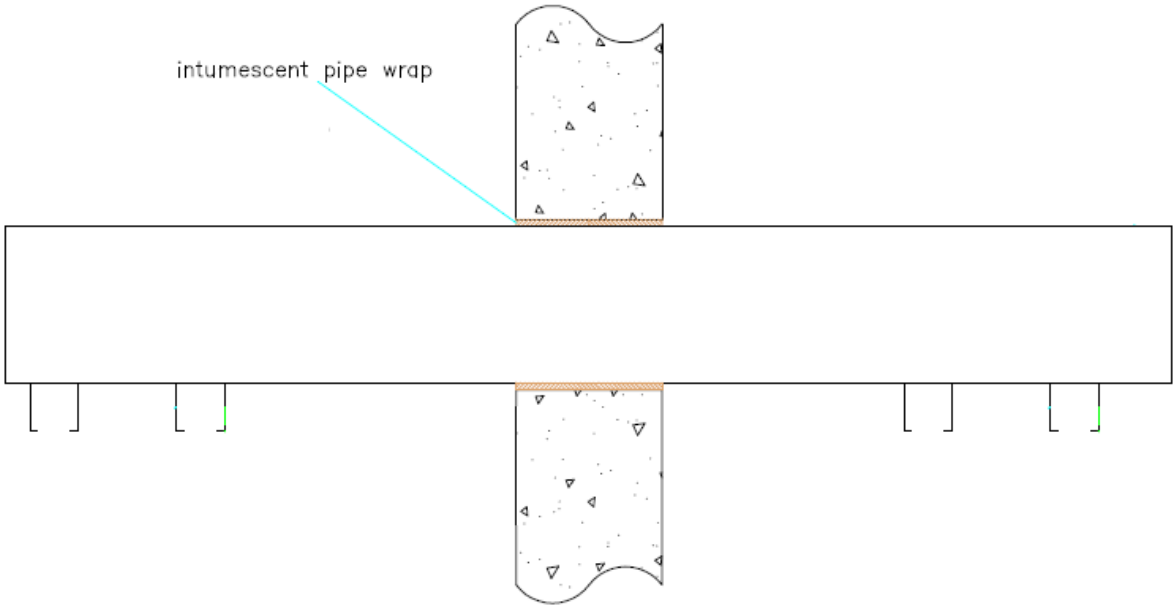
^ Wrap must be an intimate fit to the cable bundle size

A.2 Rigid wall constructions with wall thickness of minimum 150mm.

A.2.1 Penetration seals, in rigid walls

Penetration Seal: Insulated metal and combustible pipes fitted with Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS, to both sides of the wall.

Construction details:



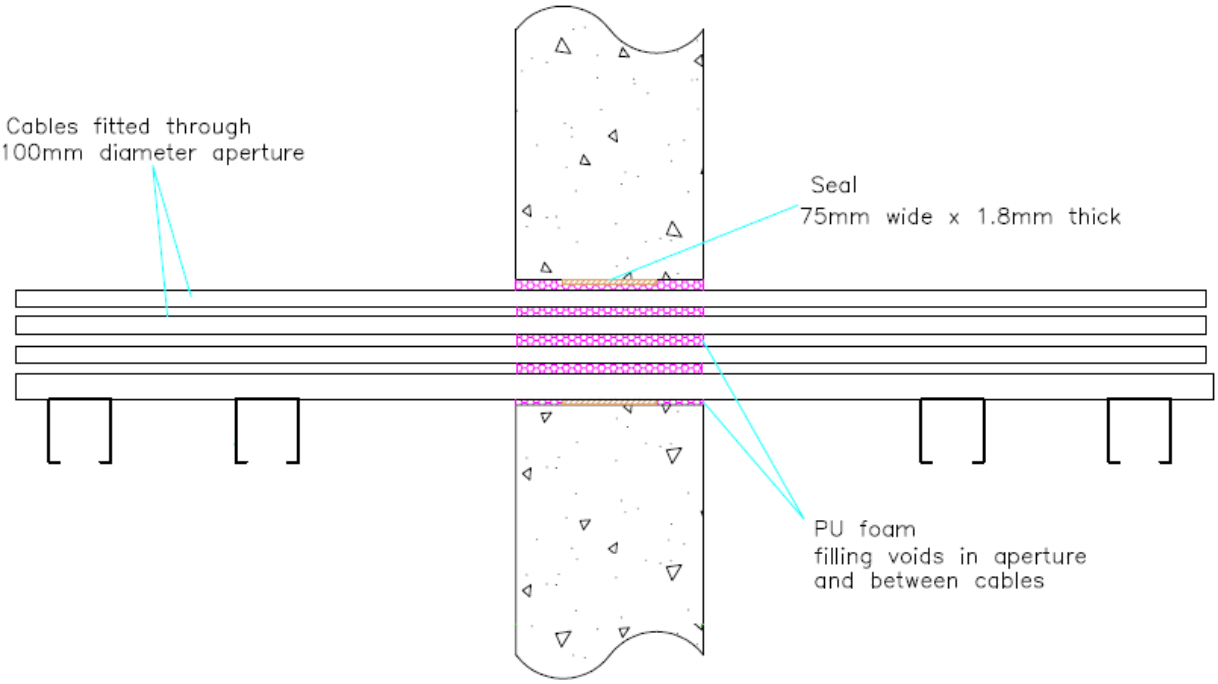
A.2.1.1

Services	Wrap size	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 40 mm, wall thickness 2 mm	50 x 3.6 mm	**EI 240 C/U, EI 240 U/C, EI 240 C/C**
Diameter 55 mm, wall thickness 2 mm		
Diameter 40 mm, wall thickness 3.3 mm		**EI 120 C/U, EI 120 U/C, EI 120 C/C**
Diameter 55 mm, wall thickness 3.3 mm		
Diameter 82 mm, wall thickness 3.3 mm		
PE pipe according to EN 1519-1, EN 12201-2 and EN 12006-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 40 mm, wall thickness 3.2 mm	50 x 3.6 mm	**EI 120 C/U, EI 120 U/C, EI 120 C/C**
Diameter 55 mm, wall thickness 3.2 mm		
Copper with 25 mm thick Armaflex insulation		
Diameter 25 mm, wall thickness 0.8-14.2 mm	50 x 1.8 mm	**EI 120 C/U**

A.2.2 Penetration seals, in rigid walls

Penetration Seal: Electrical cables fitted with Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS), fitted centrally within the wall with Firebreak 44 foam.

Construction details:



A.2.2.1

Services	Wrap size	Classification
Electrical cables in bundles up to 100 mm diameter^	75 x 1.8 mm	**EI 120**
Up to 20 mm diameter 'C3' electrical cables in accordance with HD 604.5		
Up to 15 mm diameter 'A3' electrical cables in accordance with HD 604.5		

^ Wrap must be an intimate fit to the cable bundle size

A3 cables – 5 x 1.5 mm^2 core, XPLE insulation, EVA sheath

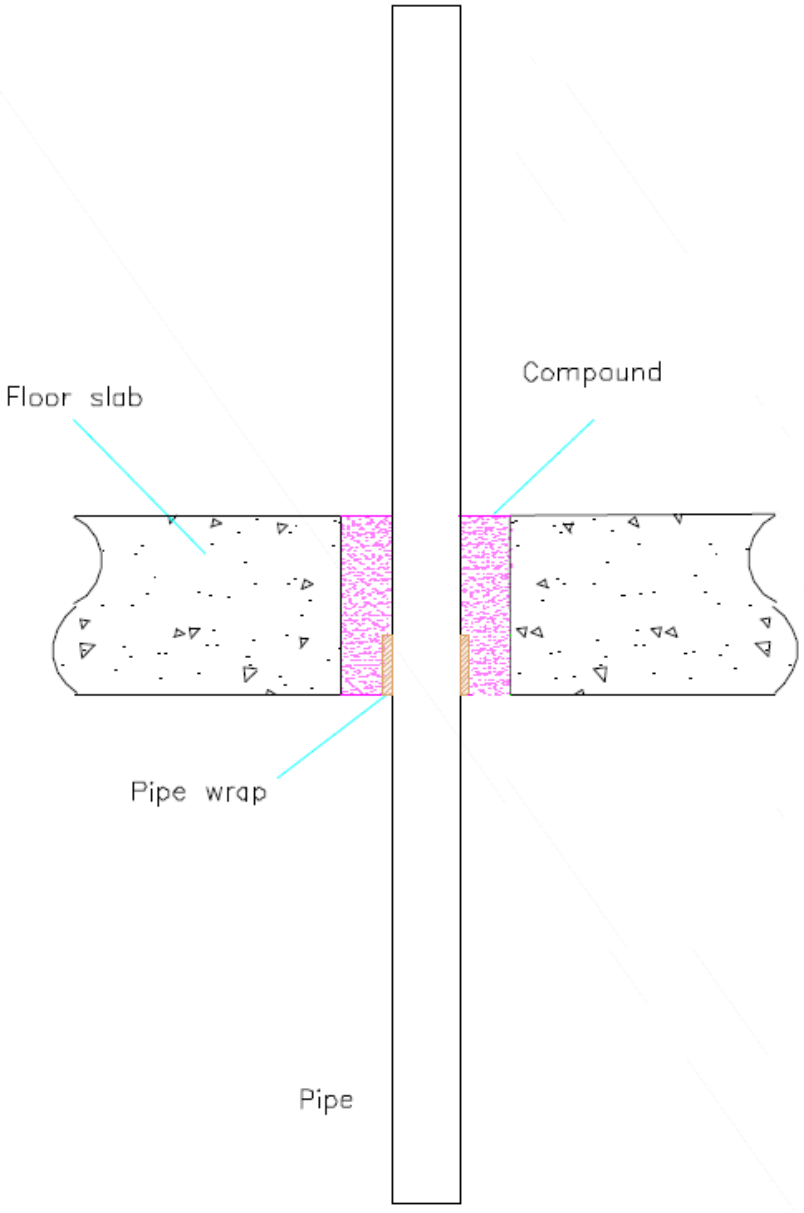
C3 cables – 4 x 95 mm^2 core, XPLE insulation, EVA sheath

A.3 Rigid floor constructions with floor thickness of minimum 150 mm

A.3.1 Penetration seals, in concrete floors

Penetration Seal: Insulated metal and combustible pipes fitted with Wrap Around Seal (WAS)/Wrap Around Seal Strip (WASS), cast in to the soffit of the floor (fire side only).

Construction details:



A.3.1.1

Services	Wrap size	Classification
PVC-U pipe according to EN 1329-1, EN 1452-2 and EN 1453-1		
Diameter 40 mm, wall thickness 3 mm	50 x 1.8 mm	**EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C**
Diameter 50 mm, wall thickness 3 mm	50 x 3.6 mm	
Diameter 55 mm, wall thickness 2 mm	50 x 1.8 mm	**E 120 U/U, E 120 C/U, E 120 U/C, E 120 C/C**
Diameter 82 mm, wall thickness 3.3 mm	50 x 3.6 mm	**EI 60 U/U, EI 60 C/U, EI 60 U/C, EI 60 C/C**
Diameter 55 mm, wall thickness 3 mm	50 x 5.4 mm	**EI 240 C/U, EI 240 U/C, EI 240 C/C**
Diameter 82 mm, wall thickness 3 mm		
Diameter 100 mm, wall thickness 3 mm		
Diameter 110 mm, wall thickness 6.6 mm	50 x 3.6 mm	**E 30 U/U, E 30 C/U, E 30 U/C, E 30 C/C** **EI 15 U/U, EI 15 C/U, EI 15 U/C, EI 15 C/C**
Diameter 110 mm, wall thickness 3.2 mm	75 x 10.8 mm	**EI 240 C/U, EI 240 U/C, EI 240 C/C**
Diameter 160 mm, wall thickness 3.2 mm		
Diameter 160 mm, wall thickness 9.5 mm	50 x 7.2 mm	**EI 30 U/U, EI 30 C/U, EI 30 U/C, EI 30 C/C**
Services	**Wrap size**	**Classification**
PE pipe according to EN 1519-1, EN 12201-2 and EN 12006-1, ABS pipe according to EN 1455-1 and SAN+PVC pipe according to EN 1565-1		
Diameter 40 mm, wall thickness 3.7 mm	50 x 1.8 mm	**EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C**
Diameter 55 mm, wall thickness 2 mm		
Diameter 75 mm, wall thickness 3 mm	50 x 3.6 mm	**E 240 U/U, E 240 C/U, E 240 U/C, E 240 C/C**
Diameter 75 mm, wall thickness 6.6 mm		**EI 240 U/U, EI 240 C/U, EI 240 U/C, EI 240 C/C**
Diameter 110 mm, wall thickness 6.6 mm		
Diameter 125 mm, wall thickness 4.8 mm		
Copper with 25 mm thick Armaflex insulation		
Diameter 25 mm, wall thickness 2-14.2mm	50 x 1.8 mm	**EI 240 C/U**