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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-20/1091 of 2020/12/09

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:

Astro Batt and Coating

Product family to which the above construction product belongs:

Fire Stopping, Fire Sealing & Fire Protective Products.
Fire Retardant Products

Manufacturer:

Astroflame (fireseals) Limited
Unit 8 The IO Centre
Stephenson Road
Segensworth,
Fareham
Hampshire
PO15 5RU

Manufacturing plant:

E055

This European Technical Assessment contains:

16 pages including 3 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 Fire Stopping and Fire Sealing – Penetration Seals : Issue September 2017

This version replaces:

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1 . Technical Description of the Product

- 1) Astro Batt and Coating is a coated mineral wool board used to reinstate the fire resistance performance of wall constructions where they have been provided with apertures for the penetration of single or multiple services.
- 2) Astro Batt and Coating is supplied coated on both faces. The board is then cut and friction fit into the aperture, prior to being inserted into the aperture in the wall.
- 3) Astro Batt and Coating 50mm thick and supplied in overall dimensions 1200mm x 600mm with a density of 140kg.m³.
- 4) Astro Intu Mastic is required to seal all joints and junctions during the sealing process. Astro Intu Mastic is subject to a separate ETA referenced 14-0050 & 14-0049.
- 5) Astro HPE Sealant is required to seal around specific services (See Annex C). Astro HPE Sealant is subject to a separate ETA referenced ETA 14/0096.

2 . Specification Of The Intended Use In Accordance With The Applicable European Assessment Document (EAD)

The intended use of Astro Batt and Coating is to reinstate the fire resistance performance of rigid and flexible wall constructions where they are penetrated by various cables and metallic pipes

- 1) The specific elements of construction that the system Astro Batt and Coating may be used to provide a penetration seal in, are as follows:

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

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.

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

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

- 2) The Astro Batt and Coating may be used to provide a penetration seal with pipes and cables, and cable trays and ladders (for details see Annex C).
- 3) The total amount of cross sections of services (including insulation) should not exceed 60% of the penetration area.
- 4) The Astro Batt and Coating may be used to seal apertures in the separating element up to 730mm wide by 1200mm high or 600mm x 600mm dependant on the configuration. The minimum permitted separation between adjacent seals/apertures is 200mm.
- 5) Pipes must be installed singular, cables require no minimum separation.

- 6) The provisions made in this European Technical Assessment are based on an assumed working life of the Astro Batt and Coating of 10 years, provided that the conditions laid down in the product data sheet 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.

2.1 Use Category

Type Z₁: 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.

3 . Performance Of The Product And References To The Methods Used For Its Assessment

BWR	Characteristic	Assessment of characteristic
2	Safety in case of fire	
	Reaction to fire	No performance assessed
	Resistance to fire	See clause 2.2
3	Hygiene, Health and the Environment	
	Air permeability	See clause 3.1
	Content and release of Dangerous substances	See clause 3.2
4	Safety in use	
	Durability and Serviceability	see clause 4.1
5	Protection against noise	
	Airborne sound insulation	See clause 5.1

3.1 Safety in case of Fire

3.1.1 Reaction to Fire

No performance assessed.

3.2.1 Resistance to Fire

Astro Batt and Coating has been tested in accordance with BS EN 1366-3: 2009 based upon the test results and the field of direct application specified within EN 1366-3: 2009, the system Astro Batt and Coating has been classified in accordance with EN 13501-2, as given in Annex C:

The seals may only be penetrated by the services described in Annex C; other parts or support constructions must not penetrate the seal.

The service support construction must be fixed to the building element containing the penetration seal or a suitable adjacent building element, in such a manner that in the case of fire, no additional load is imposed on the seal. Furthermore it is assumed that the unexposed face support is maintained for the required period of fire resistance.

Pipes must be perpendicular to the seal surface.

It is assumed that compressed air systems are switched off by other means in the case of fire.

The function of the pipe seal in case of pneumatic dispatch systems, pressurised air systems etc. is guaranteed only when the systems are shut off in case of fire.

The assessment does not cover the avoidance of destruction of the seal or of the abutting building element(s) by forces caused by temperature changes in case of fire. This has to be considered when designing the piping system.

The assessment does not address any risks associated with leakage of dangerous liquids or gases caused by failure of the pipe(s) in case of fire.

The durability assessment does not take account of the possible effect of substances permeating through the pipe on the penetration seal.

3.3 Health, Hygiene and the environment

3.3.1 Air permeability

Astro Batt and Coating has been tested in accordance with BS EN 1314-1 to provide the following results:

Product tested		Stopseal Batt (50mm)		
Pressure (Pa)	Results under positive 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	0.6	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

3.3.2 Content and release of Dangerous substances

Astroflame(fireseals) Ltd have presented a declaration that Astro Batt and Coating is in compliance with Council Directive 76/769/EEC of 27th July 1976 on the approximation of the laws, regulations and administrative provisions of the Member States relating to restrictions on the marketing and use of certain dangerous substances and preparations (incl. all amendments and adaptations).

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 Batt and Coating material 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.

3.4 Safety in use

3.4.1 Durability

Astro Batt and Coating has been tested in accordance with EOTA Technical Report - TR024 – Edition November 2006, for the type Z₁ use category specified in EAD 350454-00-1104, Fire Stopping and Fire Sealing Products – Penetration Seals and the results of the tests have demonstrated suitability for penetration seals 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.

3.5 Protection against noise

3.5.1 Airborne sound insulation

The results of the test provided the following single number rating:

R_w (C;Ctr)= 24(-2;-3)

4 . Assessment and Verification Of Constancy Of Performance (Hereinafter AVCP) System Applied, With References To Its Legal base

According to the decision 1999/454/EC of the European Commission the system of assessment and verification of constancy of performance (see Annex V to the Regulation (EU) No 305/2011) given in the following table apply:

Products	Intended use/s	AVCP System
Fire stopping and fire sealing products	For fire compartmentation and / or fire protection or fire performance	System 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 2020-12-09 by



Thomas Bruun
Managing Director, ETA-Danmark

Annex A

Reference Documents

EN 13501-2 Fire classification of construction products and building elements – Part 2: Classification using test data from fire resistance tests

EOTA TR 024 Characterisation, Aspects of Durability and Factory Production Control for Reactive Materials, Components and Products

Annex B

Description of Product

Astro Batt and Coating

A detailed specification of the product is contained in document "Evaluation Report" relating to the European Technical Assessment ETA – 14/0096 issued on 17.03.14, of Astro Batt and Coating which is a non-public part of this ETA.

Annex C

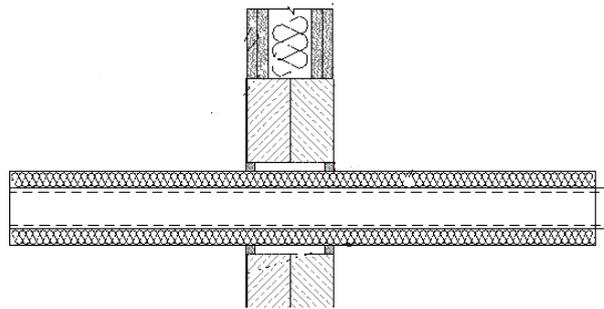
Resistance to Fire Classification of Astro Batt and Coating

C1.1 Flexible and Rigid wall constructions according to 1.2.1 with wall thickness of minimum 100 mm

C1.2 Penetration seal with Astro Batt and Coating installed centrally within the wall

Construction details:

- Continuous/sustained insulated mettalic pipes installed at any postion witjhin the wall(min. seperation 50mm from seal edges).
- Double layer of Astro Batt and Coating installed centrally within the wall.
- Max. Aperture size 730mm wide x 1200mm high



C.1.3

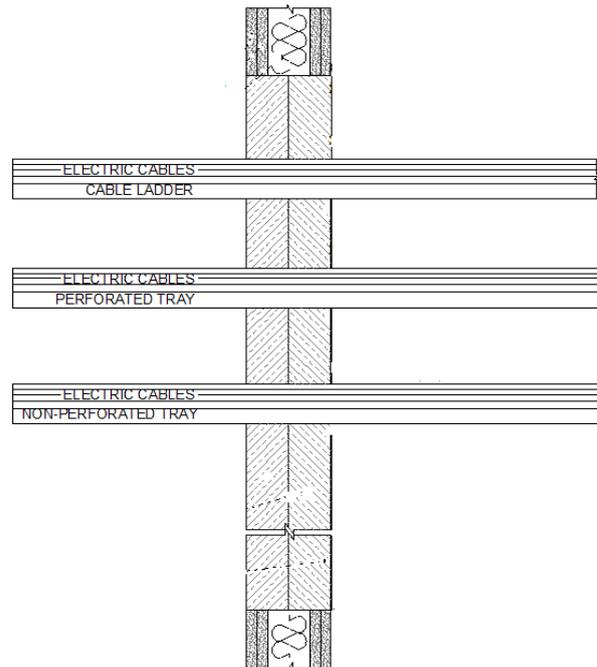
Service(s)	Insulation	Seal	Classification
Mild Steel or Copper			
40mm diameter and 1.5 – 14.2 mm wall	20mm thick foil faced glass wool insulation (min 80Kg/m ³)	15mm deep x 15mm wide annulus Astro HPE Sealant to both faces seal	90 U/C EI 60 U/C
40-159mm diameter and 2.3 – 14.2 mm wall	30mm thick foil faced glass wool insulation (min 80Kg/m ³)		EI 60 U/C

Service(s)	Insulation	Seal	Classification
Mild Steel			
40mm diameter and 1.7 – 14.2 mm wall	20mm thick foil faced glass wool insulation (min 80Kg/m ³)	15mm deep x 15mm wide annulus Astro HPE Sealant to both faces of the seal	E 90 U/C EI 60 U/C
40-150mm diameter and 2.3 – 14.2 mm wall	30mm thick foil faced glass wool insulation (min 80Kg/m ³)		EI 60 U/C

C2.1 Flexible and Rigid wall constructions according to 1.2.1 with wall thickness of minimum 100 mm

C.2.2 Penetration seal with Astro Batt and Coating installed centrally within the wall

- Cables fitted at any position within the aperture (min. 50mm from edge seal)
- Double layer of Astro Batt and Coating installed centrally within the wall.
- Max. Aperture size 730mm wide x 1200mm high



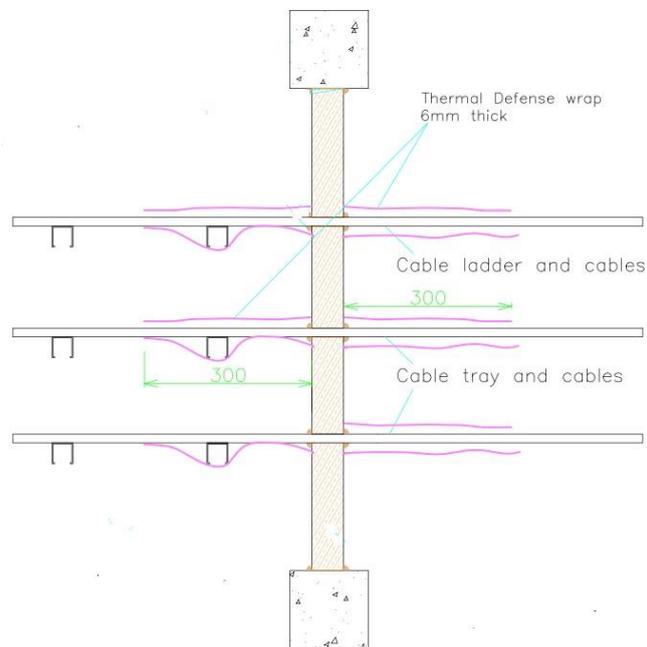
C.2.3

Service(s)	Classification
Electrical cables up to 21mm dia	EI 60
Electrical cables 22mm to 80mm dia	E 60, EI 45
Cable Trays and Ladders	EI 60
100 mm diameter bundle telecommunication cable type "F"	EI 60
Unsheathed electrical cables up to 17mm dia	E 60, EI 30
Unsheathed electrical cables 18-24mm dia	E 60, EI 15
Steel or Copper Conduits up to 16mm	E 60, EI 15
Plastic conduits up to 16mm	EI 60

C3.1 Rigid wall constructions according to 1.2.1 with wall thickness of minimum 150 mm

C.3.2 Penetration seal with Astro Batt and Coating installed centrally within the wall

- Cables fitted at any position within the aperture (min. 50mm from edge seal)
- Single layer of Astro Batt and Coating installed centrally within the wall.
- Max. Aperture size 600mm wide x 600mm high
- 6mm thick Thermal Defense Wrap insulation around cables to a distance of 300mm from the seal



C.3.3

Service(s)	Classification
Electrical cables up to 80mm dia	EI 60
Cable Trays and Ladders	EI 60
100 mm diameter bundle telecommunication cable type "F"	EI 60
Unsheathed electrical cables up to 24mm dia	EI 60