PROTECTA® FR BOARD

TECHNICAL DATA SHEET

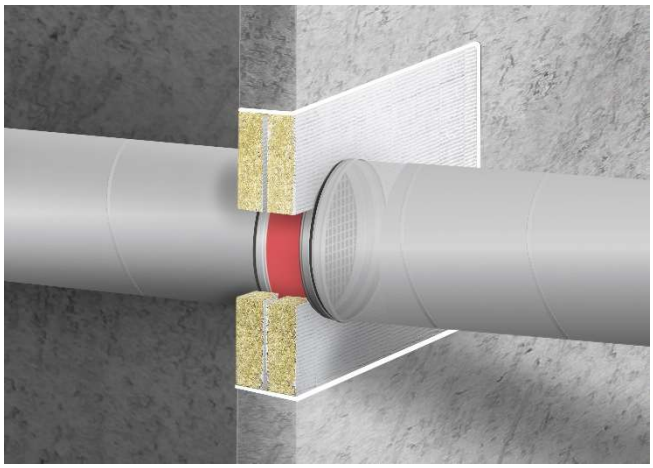
Protecta

General Product Description

Protecta® FR Board is designed to prevent the spread of fire and smoke through openings in fire rated walls and floors where openings are formed to allow the installation of multiple building services. Protecta® FR Board will also maintain the acoustic design performance in fire rated walls and floors.

Protecta® FR Board consists of a high density stone wool core, over-coated with Protecta® FR Coating. The top coating provides additional protection by significantly reducing the permeability of the stone wool core and prevents the passage of hot gases, thus reducing the temperature rise on the unexposed side and reducing heat conduction through the building services.

Protecta® FR Board is available with top coating on one or two sides, selected on the basis of installation considerations and fire resistance. On site, Protecta® FR Board must be used together with Protecta® FR Acrylic for sealing around building services and the surrounding construction.



Properties & Precautions

- Classified for all types of constructions with a wide range of building service penetrations
- Classified for linear seals between multiple different substrates; ideal for fire barriers behind claddings and facades
- May be used as internal partition walls, and barriers, beneath raised access floors and roof membranes (see separate data sheets)
- Simple and very quick to install
- Resists UV, humidity and frost (once cured)
- Easy to retrofit additional building services after installation
- Combinable with Protecta® FR Flexi Board - will accommodate movements during fire and movements in the construction it has been fitted within
- Suitable for most surfaces, including concrete, bricks, masonry, steel, wood, gypsum, glass, plastic and most non-porous surfaces. Should not be used in direct contact with bituminous materials
- May be used in unlimited lengths in walls with heights up to 1200 mm and in floors with widths up to 800 mm
- May be installed in drywalls with steel or timber studs, with or without framing around the opening
- Halogen free with added fungicides
- Protecta® FR Board can be supplied with a smooth surface
- Precautions are required to be taken to prevent a person stepping onto a blank horizontal penetration seal

Sound Insulation

Description	Sound reduction
Single 50 or 60mm FR Board 2-S as linear seal ≤ 120mm wide	Rw 55 dB
Single 50 or 60mm FR Board 2-S as large seal	Rw 29 dB
Double 50 or 60mm FR Board 1-S or 2-S as large seal	Rw 52 dB
50 or 60mm FR Board 1-S or 2-S with 50mm cavity, large seal	Rw 53 dB

Protecta® FR Board has been tested at Warringtonfire Testing and Certification Ltd (UKAS accredited); according to EN ISO 10140-2:2010.

Emission Data (indoor air quality)

Regulation or Protocol	Conclusion
French VOC Regulation	Pass/A+
Italian Regulation (public procurement)	Pass
German AgBB (2021)/ABG (2022)	Pass
Belgian Regulation	Pass
Blue Angel (DE-UZ 123)	Pass
BREEAM-International	Pass/Exemplary Level
BREEAM UK	Pass/Exemplary Level
BREEEAM NL	Pass/Exemplary Level
BREEAM-NOR	Pass/Exemplary Level
Finnish M1 Classification	Pass/M1
SINTEF	Pass
Byggvarubedömningen	Pass
DICL	Pass/Emission Class 1
ECOproduct	Pass/Very Low Emitting
WELL (EU)	Pass
LEED-EU (v4.1) BETA	Pass

Protecta® FR Board has been tested by Normec Product Testing; reports available upon request.

Air Permeability

Positive Pressure (Pa)	Leakage (m^3/h)	Negative Pressure (Pa)	Leakage (m^3/h)
25	0.00	25	0.00
50	0.01	50	0.01
100	0.03	100	0.02
200	0.08	200	0.04
300	0.20	300	0.11
450	0.63	450	0.49
600	1.01	600	0.95

Protecta® FR Board has been tested at Warringtonfire Testing and Certification Ltd (UKAS accredited); according to EN 1026: 2016.

As a part of our policy of on-going product development and testing, we reserve the right to modify, alter or change product specifications without giving notice. All information contained in this document is given in good faith and is provided for guidance only. Any drawings provided are for illustrative purposes only. As Polyseam has no control over the methods or competence of installation and of prevailing site conditions, no warranties, expressed or implied, are intended to be given as to the actual performance of the product mentioned or referred to herein and no liability whatsoever will be accepted for any loss, damage or injury arising from the use of the information given.

ETA UKCA
Technical Data Sheet to ETA 22/0733, ETA 22/0771, UKTA 22/0034 & UKTA 22/0025

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Additional Aperture Sizes in Floors

Under EN 1366-3 rules for penetration seals, results from tests in floors with a penetration seal length of minimum 1 m apply to any length as long as perimeter length to seal area ratio is not smaller than that of the test specimen.

The following aperture sizes are allowed where 2400 x 1200 mm is specified in penetration seals assessments; Annex A:

Maximum Aperture Sizes within Floors or between Floors and Walls
1,200 mm width x 2,400 mm length (tested)
1,200 mm width x 12,000 mm length
≤ 800 mm width x ∞ (infinite) length

The following aperture sizes are allowed where 1200 x 600 mm is specified in penetration seals assessments, Annex A:

Maximum Aperture Sizes within Floors or between Floors and Walls
600 mm width x 1,200 mm length (tested)
600 mm width x 6,000 mm length
≤ 400 mm width x ∞ (infinite) length

Pipe End Configurations

When testing pipes, one can choose not to cap (or close) the pipe, or cap the pipe inside the furnace, or outside the furnace, or on both sides. The configuration chosen depends on the intended application of the pipe and/or the installation environment.

The code defining if a pipe is capped is stated after the fire classification. For instance, EI 60 C/U which means the pipe was capped inside the furnace, and uncapped outside the furnace. The test configuration defines the approvals possible.

Our engineering judgment based on EN 1366-3:2021 are:

Intended use of pipe		Pipe end condition [3]
Rainwater pipe, plastic	At drainage	U/U [1]
	Not at drainage	C/C [2]
Drainage or sewage pipe, plastic	Ventilated drain	C/U [1]
	Unventilated drain	U/C [2]
	Drain w/water trap	U/C [1]
	Not at drainage	C/C [2]
Metal or plastic pipe in closed system (water, gas, air etc.)		C/C [1]
Metal pipe in ventilated system (sewage etc.)		U/C [1]
Flue gas recovery system pipe, plastic		U/C [1]
Pipe with open ends and ≥ 50cm length on both sides, plastic		U/U [2]
Waste disposal shaft pipe, metal		U/C [2]

[1] Suggested in EN 1366-3:2022. [2] Polyseam' s judgment based on tests.
[3] U/U classified fire seals cover C/U, U/C and C/C. C/U classified fire seals cover U/C and C/C. U/C classified fire seals cover C/C (except steel pipes, where U/C classified fire seals cover C/U and C/C. C/U classified fire seals cover C/C)

Analysis of CPVC Pipes

Protecta® FR Acrylic, as part of the FR Board system, has been tested for chemical resistance of a sealant when applied to a CPVC pipe. The sealant does not affect CPVC pipes; the tests showed no difference between the control and exposed results at Yield. Reports are available upon request.

Reaction To Fire

Aperture Size	Classification
Unlimited	D-s1, d0
≤ 600 mm height horizontally and width vertically at ∞ length	C-s1, d0

Sizes & Packaging

Product code	Product description	Qty / pallet
A007	FR Board 50mm 1-S ribbed	80
A006	FR Board 50mm 2-S ribbed	80
A008	FR Board 60mm 2-S ribbed	72
A052	FR Board 80mm 2-S ribbed	50
A053	FR Board 100mm 2-S ribbed	40

Technical Data

Density	Board: 160 kg/m³ (150 – 170 kg/m³) Coating: 1.3 – 1.4 kg/ltr
Durability	Y_1 - Intended for use at temperatures below 0°C with exposure to UV and humidity but no exposure to rain. Includes lower classes Y_2, Z_1 and Z_2.
Non-sticky	Max. 75 minutes (sealant)
Film forming	Max. 25 minutes (sealant)
Totally hardened	3 to 5 days depending on thickness and temperature
Flexibility	Medium, 7.5%
Thermal conduct.	0.038 W/mK
Storage	May be stored for a long period of time. To be stored in temperatures between 5 °C and 30 °C
Limitations	If the boards are to be used in permanently humid areas Protecta® FR Coating should be applied over any sealant or pipe wraps
Temperature range	-30°C to +80°C (when hardened)
Installation temp.	+5°C to +50°C
Working life	Minimum 25 years if conditions are met
Colour	White surface, green core FR Acrylic: NCS 1202 – Y26R, RAL 9002 (pure white also available)

Test Standards

This Technical Data Sheet and the Installation Instructions are based on the product's ETAs and UKTAs issued in accordance with regulation (EU) No 305/2011 on the basis of EAD 350454-00-1104, September 2017, tested to EN 1366-1, -3, -4 & -12 in conjunction with EN 1363-1. The product holds the CE-mark, the UKCA-mark, and the UL-EU-mark.

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