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European Technical Assessment ETA-23/0496 of 2023/08/22

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:	Protecta FR Board partitions
Product family to which the above construction product belongs:	Internal Partition Kits For Use As Non-Loadbearing Walls
Manufacturer:	Polyseam Ltd 15 St Andrews Road Huddersfield West Yorkshire HD1 6SB UK
Manufacturing plant:	Polyseam Ltd 15 St Andrews Road Huddersfield West Yorkshire HD1 6SB UK
This European Technical Assessment contains:	16 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	EAD 210005-00-0505 for Internal partition kits for use as non-loadbearing walls
This version replaces:	-

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I. SPECIFIC PARTS OF THE EUROPEAN TECHNICAL ASSESSMENT

1 <u>Technical description of the product</u>

- 1) Protecta FR Board partitions are non-loadbearing walls designed to provide a fire resistance performance.
- 2) The Protecta FR Board partitions covered by this ETA are described in detail in annex A of this ETA.
- 3) Polyseam Ltd submitted a written declaration that Protecta FR Board 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 <u>Specification of the intended uses of the product in accordance with the applicable European</u> <u>Assessment Document (Hereinafter EAD)</u>

Detailed information and data is given in Annex A.

- 1) The intended use of Protecta FR Board partitions is as non-loadbearing fire resisting partitions, to provide compartmentation, mainly for residential buildings, offices and public buildings.
- 2) The Protecta FR Board partitions may be used to provide fire resisting, non-loadbearing partition walls at dimensions of up to 4 m high and of unrestricted length. The partition shall be fixed to surrounding constructions as described in Annex A.
- 3) The provisions made in this European Technical Assessment are based on an assumed working life of the Protecta FR Board partition of 25 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.
- 4) Intended for uses in internal conditions with a mean air temperature in the range from 5 °C to 35 °C with a minimum of 0 °C and a maximum of 50 °C, and a mean daily air relative humidity in the range from 20 %RH to 75 %RH. Maximum air relative humidity only exceeding 85 %RH for short periods of time
- 5) The Protecta Interior Paint FR-1 is assessed in ETA-21/0044 for environmental category Z₂: intended for uses in internal conditions with humidity lower than 85 % RH excluding temperatures below 0°C, without exposure to rain or UV.

3 <u>Performance of the product and references to the methods used for its assessment.</u>

Characteristic	Assessment of characteristic
3.2 Safety in case of fire (BWR 2)	
Reaction to fire	Where FR Board is exposed in Annex A: D – s1, d0 in accordance with EN 13501-1 and Commission Delegated Regulation 2016/364
	Where plasterboards are exposed in Annex A: A2 in accordance with EN 13501-1 and Commission Delegated Regulation 2016/364
	Where Protecta Interior Paint FR-1 coated wood based particle boards are exposed in Annex A:
	B – s1 , d0 in accordance with EN 13501-1 and Commission Delegated Regulation 2016/364
Resistance to fire	The product is classified as shown in annex A
3.3 Hygiene, health and the environment (BWR 3)	
Content, emission and/or release of dangerous substances*	No performance assessed
Water vapour permeability	No performance assessed
3.4 Safety and accessibility in use (BWR 4)	
Sill height	No performance assessed
Resistance to damage and functional failure from horizontal loads	Use category I: Zones accessible primarily to those with high incentive to exercise care. Small risk of accidents occurring and of misuse (100 Nm).
Resistance to damage and functional failure from eccentric vertical loads	No performance assessed
Resistance to horizontal linear static loads	No performance assessed
Resistance to functional failure from point loads parallel or perpendicular to the surface	No performance assessed
Rigidity of partitions to be used as a substrate for ceramic tiling	No performance assessed
Safety against personal injuries by contact	No sharp edges or cutting edges are present
Resistance to deterioration caused by: – physical agents – chemical agents – biological agents	No performance assessed

Characteristic	Assessment of characteristic
3.5 Protection against noise (BWR 5)	
Airborne sound insulation	See annex A
Sound absorption	No performance assessed
3.6 Energy economy and heat retention (BWR 6)	
Thermal resistance	No performance assessed
Thermal inertia	No performance assessed

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

According to Annex V of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 and according to the decision 98/213/EC in compliance with 210005-00-0505 Internal partition kits for use as non-loadbearing walls the system 1 of Assessment and Verification of Constancy of Performance applies.

5 <u>Technical details necessary for the implementation of the AVCP system, as provided for in the</u> <u>applicable EAD</u>

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 2023-08-22 by

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Managing Director, ETA-Danmark

ANNEX A – Resistance to Fire Classification – Protecta FR Board partition

A.1.1 - FR Board as a partition wall



HORIZONTAL SECTION

Minimum 80 mm thick and maximum 1200 mm long by 600 mm high

Types of studs and dimensions

Timber C16 or higher grade, minimum 95 mm deep by 45 mm wide

Exposed area of studs are painted before or after installation of panels with 220 μm WFT Protecta Interior Paint FR-1

Floor and ceiling profiles – types and dimensions, different options

- 1. Directly against concrete floors or ceilings $\ge 650 \text{ kg/m}^3$
- 2. Directly against timber floors or ceilings C16 or higher painted \ge 80 mm on each side ¹⁾
- 3. Top and bottom plates with timber studs C16 or higher grade minimum 95 mm deep by 45 mm wide with exposed timber painted ¹⁾

¹⁾ Painted before or after installation of panels with $\ge 220\mu$ WFT Protecta Interior Paint FR-1

Abutting wall profiles - types and dimensions, different options

- 1. Directly against concrete walls $\geq 650 \text{ kg/m}^3$
- 2. Directly against timber walls C16 or higher painted \ge 80 mm on each side ¹⁾
- 3. Timber studs C16 or higher grade minimum 95mm deep by 45 mm wide with exposed timber painted ¹⁾
- ¹⁾ Painted before or after installation of panels with \geq 220 μ m WFT Protecta Interior Paint FR-1

Types of fasteners and dimension

Any first or last stud is fixed to the abutting wall with \ge 80 mm long screws c/c \le 700 mm

Middle studs are fixed top and bottom with ≥ 2 no. ≥ 80 mm long screws

Any top or bottom plates are fixed to surrounding constructions with \ge 80 mm long screws c/c \le 700 mm

Types of insulation and Material specification

Single Protecta FR Board 80 mm 2-S, or, double Protecta FR Board 40mm 1-S (back-to-back)

Distances and spacings between the fasteners

Distance between studs should be \leq 1,200 mm (c/c 1,245 mm)

A.1.2 – Resistance to fire classification

E90 / E160

Field of application – see annex B

A.1.3 – Airborne sound insulation

No performance assessed





HORIZONTAL SECTION

Minimum 60mm thick and maximum 1200 mm long by 600 mm high

Types of studs and dimensions

Timber C16 or higher grade, minimum 95 mm deep by 45 mm wide

Side of studs are covered with a single layer of Protecta FR Board 60mm 2-S

Floor and ceiling profiles – types and dimensions, different options

- 1. Directly against concrete floors or ceilings $\ge 650 \text{ kg/m}^3$
- 2. Directly against timber floors or ceilings C16 or higher covered with a single layer of Protecta FR Board 60 mm 2-S 95mm deep positioned centre to the wall
- 3. Top and bottom plates with timber studs C16 or higher grade minimum 95 mm deep by 45 mm wide where inside of plates are covered with a single layer of Protecta FR Board 60 mm 2-S

Abutting wall profiles - types and dimensions, different options

- 1. Directly against concrete walls \geq 650 kg/m³
- 2. Directly against timber walls C16 or higher covered with a single layer of Protecta FR Board 60 mm 2-S 95 mm deep positioned centre to the wall
- 3. Timber studs C16 or higher grade minimum 95 mm deep by 45 mm wide where inside of studs are covered with a single layer of Protecta FR Board 60 mm 2-S

Types of fasteners and dimension

Any first or last stud is fixed to the abutting wall with \ge 120 mm long screws fitted 100 mm from corners then c/c \le 750 mm

Middle studs are fixed top and bottom with ≥ 2 no. ≥ 120 mm long screws

Any top or bottom plates are fixed to surrounding constructions with \ge 120 mm long screws fitted 100mm from corners then c/c \le 750 mm

Types of insulation and Material specification

Single Protecta FR Board 60 mm 2-S

Distances and spacings between the fasteners

Distance between studs should be \leq 1,320 mm (c/c 1,365 mm)

A.2.2 – Resistance to fire classification

E30 / EW30 / EI45

Field of application – see annex B

A.2.3 – Airborne sound insulation

Test Result R_w (C;C_{tr}) = 29 (0;-2) dB



A.3.1 - FR Board within a partition wall

Minimum 12.5 mm thick plasterboards, single layer each side

Types of studs and dimensions

Steel C-studs minimum 50 mm wide by 35 mm high

Steel U-channels head and base track minimum 50 mm wide by 25 mm high

Floor and ceiling profiles – types and dimensions, different options

1. Directly against concrete floors or ceilings \geq 650 kg/m³

Abutting wall profiles – types and dimensions, different options

- 1. Directly against concrete walls $\geq 650 \text{ kg/m}^3$
- 2. Directly against non-combustible drywall

Types of fasteners and dimension

Studs are friction fitted between head and base tracks

Head tracks are fixed to surrounding constructions with \ge 60 mm long screws fitted 50 mm from corners then c/c \le 600 mm

Base tracks are fixed to surrounding constructions with \ge 80mm long screws fitted 50 mm from corners then c/c \le 600 mm

Types of insulation and Material specification

Single Protecta FR Board 40 mm 2-S, 140 kg/m³

Distances and spacings between the fasteners

Distance between studs should be \leq c/c 600mm

A.3.2 – Resistance to fire classification

E60 / EI60

Field of application – see annex B

A.2.3 – Airborne sound insulation

Test Result R_w (C;C_{tr}) = 35 (-1;-5) dB



A.4.1 - FR Board within a partition wall

Minimum 12 mm thick P2 E1 wood based particle boards, single layer each side

Exposed face of particle boards painted before or after installation with \geq 220 μm WFT Protecta Interior Paint FR-1

Types of studs and dimensions

Timber C16 or higher grade, minimum 63 mm deep by 38 mm wide

Floor and ceiling profiles – types and dimensions, different options

1. Directly against concrete floors or ceilings $\ge 650 \text{ kg/m}^3$

Abutting wall profiles - types and dimensions, different options

- 1. Directly against concrete walls \geq 650 kg/m³
- 2. Directly against non-combustible drywalls
- 3. Directly against combustible drywalls with abutting corners painted 100 mm with \geq 220 μm WFT Protecta Interior Paint FR-1

Types of fasteners and dimension

Any first or last stud is fixed to the abutting wall with \ge 80 mm long screws fitted 100 mm from corners then c/c \le 750 mm

Middle studs are fixed top and bottom with \geq 2 no. \geq 80 mm long screws

Top plates are fixed to surrounding constructions with \ge 80 mm long screws fitted 100 mm from corners then c/c \le 750 mm

Bottom plates are fixed to surrounding constructions with \ge 100 mm long screws fitted 100 mm from corners then c/c \le 750 mm

Types of insulation and Material specification

Single Protecta FR Board 40 mm 2-S, 140 kg/m³

Distances and spacings between the fasteners

Distance between studs should be \leq c/c 600 mm

A.4.2 – Resistance to fire classification

E60 / EW60 / EI60

Field of application – see annex B

A.4.3 – Airborne sound insulation

No performance assessed

ANNEX B – Resistance to Fire Classification – Protecta FR Board partition – Field of application

The classifications in annex A applies within the following field of application:

- Decrease in height
- Increase in thickness of the wall
- Increase in thickness of the component materials
- Decrease in linear dimensions of boards or panels but not thickness
- Decrease in stud spacing
- Decrease in distance of fixing centres
- Increase in the number of horizontal joints, not more than 500 ± 150 mm from the top edge
- Increase in the number of vertical joints