



Laboratory for Fire Safety

*Classification of reaction to fire in accordance with
EN_13501-1:2018 of Bostik Paneltack HM adhesive
bonding system for Cembrit Patina fiber cement panel*

Classification report

Report number Y 2424-4E-RA-001 dated 25 October 2021

Laboratory for Fire Safety

Classification of reaction to fire in accordance with EN_13501-1:2018 of Bostik Paneltack HM adhesive bonding system for Cembrit Patina fiber cement panel

Classification report

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Notified body no. NB 2264

Product name Bostik Paneltack HM adhesive bonding system for Cembrit Patina fiber cement panel

Report number Y 2424-4E-RA-001
Date 25 October 2021
Reference HL/NvD//Y 2424-4E-RA-001
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1 Introduction

On behalf of Bostik Benelux B.V. an investigation was performed with respect to the reaction to fire properties of Bostik Paneltack HM adhesive bonding system for Cembrit Patina fiber cement panel.

This classification report defines the reaction to fire classification of the product in accordance with the procedures described in EN 13501-1: 2018.



For this type of measurements the Laboratory for Fire safety has been accredited by the Dutch "Raad voor Accreditatie" (RvA).

The RvA is member of EA MLA (**EA MLA: European Accreditation Organisation MultiLateral Agreement**: <http://www.european-accreditation.org>).

EA: "Certificates and reports issued by bodies accredited by MLA and MRA members are considered to have the same degree of credibility, and are accepted in MLA and MRA countries."

2 Product description

2.1 General

The information in this chapter is based on information provided by the client.

The product investigated is Bostik Paneltack HM, an adhesive bonding system for Cembrit fiber cement panels, hereinafter also called 'the product'. The intended application is adhesives for the fixing of façade panels.

2.2 Harmonised product standard

According to the client there was no harmonised European product for the Paneltack HM adhesive bonding system at the time the tests were conducted and this report was drawn up. Because the investigation concerns the reaction to fire properties of the paneltack adhesive bonding system in combination with Cembrit Patina, the reaction to fire investigation is based on 'mounting and fixing provisions' from the product standard for flat fibre cement panels EN 12467:2012+A2:2018.

2.3 Product identification

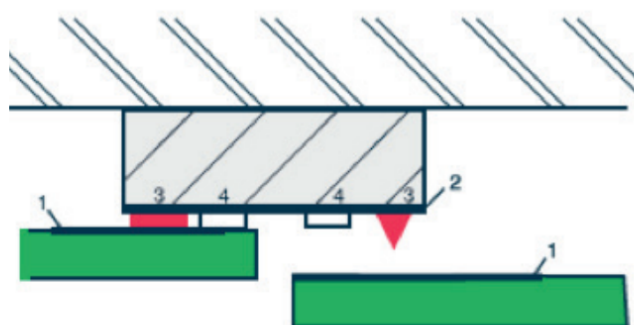
The most important parameters for identifying the product are summarized in Tables 2.1 and 2.2 below.

t2.1 General information of product to be tested

Product	Bostik Paneltack HM adhesive bonding system for Cembrit Panels
Bostik Paneltack HM adhesive bonding system	
Date of sample arrival:	04-06-2021
Name of the manufacturer:	Bostik Benelux B.V.
Sampling done by:	W. Treffers
Sampling date:	02-06-2021
Identification of samples:	Table 2.2
Cembrit Patina fibre cement panel	
Date of sample arrival:	17-06-2021
Name of the manufacturer:	Cembrit BV, Vonderweg 7, 7468 DC ENTER
Sampling done by:	M. van der Most
Sampling date:	15-06-2021
Identification of samples:	Table 2.2

t2.2 Additional information of product to be tested

Product	Bostik Paneltack HM adhesive bonding system for Cembrit Panels
Type of product	Adhesive bonding system for the fixing of cladding panels for façade cladding
Description	<p>The adhesive bonding system consists of:</p> <ul style="list-style-type: none"> - 1: Pretreatment for cladding panel: Bostik Primer Q - 2: Pretreatment for support construction: Bostik Primer SX Black - 3: Bostik Foamtape - 4: Bostik Paneltack HM - 5: Façade panel



Paneltack HM	
Type of product	Bostik Paneltack HM (High Modulus) is a moisture-curing, elastic adhesive with high modulus based on SMP ((Silyl Modified Polymers), specially developed for bonding fibre-cement boards, natural stone and aluminium composite cladding panels.
Application	Applied on each vertical profile of the subframe as one uninterrupted bead, 1 hour after pre-treatment with the primer
Manufacturer	Bostik Benelux B.V., The Netherlands
Product / EAN code	30132201
Batch no.	LOT. FA21215563 BB. 08/2022
Colour	Black
Weight [kg/m ¹]	1.5 g/ml
Specifications	Cartridge 290 ml
Use of flame retardants	No



Bostik FoamTape

Type of product	FoamTape is part of the complete PanelTack system and serves as a spacer for the adhesive bead, to ensure the proper adhesive thickness between the panel and the support structure. FoamTape provides an initial fixation of the panel or substrate until the Paneltack HM™ adhesive has cured, while ensuring a strong, lasting bond.
Application	Applied on each vertical profile of the subframe, 1 hour after pre-treatment with the primer
Manufacturer	Bostik Benelux B.V., The Netherlands
Product / EAN code	30182771
Batch no.	162101-14
Colour	Black
Weight [kg/m ¹]	Approx. 60 kg/m ³
Specifications	Double-sided adhesive FoamTape 12 x 3 mm
Use of flame retardants	No



Bostik Primer SX Black

Type of product	Primer SX Black is a black-coloured liquid primer for Pre-treatment and improved adhesion of smooth-planed wooden support structures to which cladding panels will be bonded
Application	Applied on each vertical profile of the subframe (using a roller) prior to bonding
Manufacturer	Bostik Benelux B.V., The Netherlands
Product / EAN code	30023350
Batch no.	DB21585420
Colour	Black
Weight [kg/m ¹]	1.03 g/ml
Use of flame retardants	No



Bostik Primer Q

Type of product	Primer for pretreatment of the cladding panel. The Primer is a transparent polyurethane suitable for use with various panels and wall cladding materials, including some fiber cement boards (FCB) and porous substrates.
Application	Applied on the back of the cladding panel to pre-treat the bonding side of the cladding panel prior to bonding the panel by positioning and pressing the panels onto the foamtape and paneltack adhesive
Manufacturer	Bostik Benelux B.V., The Netherlands
Product / EAN code	30612664
Batch no.	DB16952444
Colour	Transparent / brown
Weight [kg/m ¹]	1.2 g/ml
Use of flame retardants	No



Cembrit Patina

Type of product	Cembrit Patina is a through coloured fibre cement board used as cladding panel of a ventilated facade solution in all types of constructions.
Manufacturer	Cembrit BV, Vonderweg 7, 7468 DC ENTER
Product / EAN code	PHU QB 141-152 EN12467 A4 NT
Batch no.	CE 5B033650 43030304 – 23/03/2021 – P222
Colour	P22 (Pearl)
Density	1550 kg/m ³
Specifications	8 mm thickness
Use of flame retardants	No



Peutz was not involved in the selection of the test specimen (or of its materials). The laboratory cannot make any declaration about the representativeness of the provided specimen and the samples made available. The values mentioned are the nominal values as given by the client, unless otherwise stated (MV, measured value).

3 Reports and results in support of this classification

3.1 Reports

The client has confirmed that the reports provided (see Table 3.1) may be used for this classification.

t3.1 Reports in support of classification

Name of laboratory	Name of client	Number and date of report	Test method
			Field of application rules
Peutz bv	Bostik Benelux B.V.	Y 2424-2E-RA-001; 25-10-2021	EN 13823:2020
Peutz bv	Bostik Benelux B.V.	Y 2424-3E-RA-001; 25-10-2021	EN-ISO 11925-2:2010

3.2 Results

The results obtained are summarised in Tables 3.2 and 3.3.

t3.2 Summary of test results EN 13823

Parameter	Number of tests	Results	
		Continuous parameters (average)	Compliance parameters
FIGRA _{0,2MJ}	[W/s]	22	-
FIGRA _{0,4MJ}	[W/s]	22	-
THR _{600s}	[MJ]	3	1.8
SMOGRA	[m ² /s ²]	7	-
TSP _{600s}	[m ²]	44	-
LFS reaching edge		-	N
Flaming droplets/particles			
- FDP ≤ 10 s		-	N
- FDP > 10 s		-	N

t3.3 Summary of test results EN-ISO 11925-2

Flame application time 30 s		Number of tests	Results	
			Continuous parameters (average)	Compliance parameters
Parameter				
Surface exposure	Fs ≤ 150 mm	6	-	J
	Ignition of filter paper		-	N
Edge exposure	Fs ≤ 150 mm	6	-	J
	Ignition of filter paper		-	N
Edge exposure per layer	Fs ≤ 150 mm	10	-	J
	Ignition of filter paper		-	N

3.3 Classification criteria

The classification to be obtained is based on the classification criteria given in EN 13501-1. In Tables 3.4 and 3.5 these criteria are summarised.

t3.4 Classification criteria

Test	Parameter		Class		
			B	C	D
	Continuous (average) or compliance				
EN-ISO 11925-2	Flame spread ≤ 150 mm		Y	Y	Y
EN 13823	FIGRA _{0,2MJ}	[W/s]	≤ 120	-	-
	FIGRA _{0,4MJ}	[W/s]	-	≤ 250	≤ 750
	THR _{600s}	[MJ]	≤ 7,5	≤ 15	-
	LFS reaching edge		N	N	-

t3.5 Criteria additional classifications

Test	Parameter		Class			Class		
			s1	s2	s3	d0	d1	d2
	Continuous (average) or compliance							
EN-ISO 11925-2	Ignition of filter paper		-	-	-	N	N	Y
<i>Note: ignition of filter paper leads to classification d2, irrespective of the results for FDP in EN 13823</i>								
EN 13823	SMOGRA	[m ² /s ²]	≤ 30	≤ 180	not s1	-	-	-
	TSP _{600s}	[m ²]	≤ 50	≤ 200	or s2	-	-	-
EN 13823	Flaming droplets/particles (FDP) within 600 s							
	- FDP ≤ 10 s		-	-	-	N	Y	-
	- FDP > 10 s		-	-	-	N	N	not d0 or d1

4 Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with EN 13501-1:2018 en EN 12467:2012+A2:2018

4.2 Classification

The product, Bostik Paneltack HM adhesive bonding system for Cembrit Patina fiber cement panel, has been classified to its reaction to fire behaviour as: B. The additional classification for the smoke production is: s1, the additional classification for flaming droplets is: d0.

Reaction to fire classification: B-s1, d0

4.3 Field of application

The classification is only valid for the product (Bostik Paneltack HM system) to be used as adhesive bonding system for Cembrit Patina fiber cement panel to wood substructures, as described in chapter 2 of this report.

The classification also applies to fibre cement flat sheets:

- of the same type, but with different dimensions of length and width;
- with a thickness equal to or greater than that used for the test;
- a different surface texture (smooth or embossed);
- with a density within a range of $\pm 0.15 \text{ g/cm}^3$ of the density used in the test;
- with a joint opening width equal to or smaller than those used for the test;
- fixed at different (wider or closer) horizontal or vertical fixing centres;
- without thermal insulation in the cavity or with other types of class A2-s1,d0 according to EN 13501-1 insulation materials as long as a ventilated air gap of at least $(40 \pm 1) \text{ mm}$ directly behind the sheets is present.

The classification is valid for the following end use applications:

- panels mounted with the Bostik Paneltack HM bonding system to all types of supporting frames (particularly wood and aluminium) against non-combustible walls (A2-s1,d0 or better, e.g. concrete, masonry walls, excluding gypsum plasterboard), with a thickness of at least 9 mm and a density of at least 652.5 kg/m^3 ;
- with open horizontal joints and vertical joints closed by the subframe. The result is also valid for the same type of panel used in applications without joints and used in applications with any type of closed horizontal joint (e.g. using profiles or tongues).

5 Limitations

There are no limits in time on the validity of this classification document.

This classification document does not represent type approval or certification of the product.



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This report contains 12 pages