

BRE Global Test Report

Classification of reaction to fire performance in accordance with EN 13501-1: 2007 + A1: 2009 on Cemboard

Prepared for: RCM Limited
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1 Introduction

This classification report defines the classification assigned to RCM Cemboard in accordance with the procedures given in EN 13501-1:2007+A1: 2009¹.

BRE Global

CLASSIFICATION OF REACTION TO FIRE IN ACCORDANCE WITH EN 13501-1: 2007+A1: 2009

Sponsor:	RCM Limited, Unit 27, Rosevale Road, Parkhouse Industrial Estate West, Newcastle-under-Lyme, Staffordshire, ST5 7EF
Prepared for:	RCM Limited, Unit 27, Rosevale Road, Parkhouse Industrial Estate West, Newcastle-under-Lyme, Staffordshire, ST5 7EF
Place of Manufacture:	Panel World Co., Limited, 83/1Moo11 Sethakit 1 Road, Klongmadue, Krathumban, Samutsakorn 74110, Thailand
Prepared by:	BRE Global Limited, Bucknalls Lane, Garston, Watford, WD25 9XX
Product name:	RCM Cemboard
Classification report No.:	295809
Issue number:	1
Date of issue:	23 June 2014

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2 Details of classified product

2.1 General

The product, RCM Cemboard, is defined by the test sponsor as a cement-bonded particleboard in accordance with EN 634-2² and a wood-based panel for use in construction in accordance with EN 13986³.

2.2 Product description

The product, RCM Cemboard, is described in section 2.2.2.

2.2.1 Traceability

The test samples were supplied by the test sponsor. BRE Global was not involved in the sampling process and therefore cannot comment upon the relationship between the samples supplied for test and the products supplied to market.

2.2.2 Sample details

Parameter	Details
Test sponsor	Roofing & Cladding Materials (RCM) Limited, Unit 27, Rosevale Road, Parkhouse Industrial Estate West, Newcastle-under-Lyme, Staffordshire, ST5 7EF.
Manufacturer of sample	Roofing & Cladding Materials (RCM) Limited, Unit 27, Rosevale Road, Parkhouse Industrial Estate West, Newcastle-under-Lyme, Staffordshire, ST5 7EF.
Place of manufacture	Panel World Co., Limited, 83/1Moo11 Sethakit 1 Road, Klongmadue, Krathumban, Samutsakorn 74110, Thailand.
Trade name	RCM Cemboard.
Sample reference	Note 1.
Sample description (as provided by test sponsor/manufacturer)	A rigid, medium density, high performance cement bonded particle building board manufactured from chemically treated rubber wood chips mixed with Portland cement.
Description of sample (as received)	A grey rigid board with embedded wood particles.
Test sponsor's product data	
Generic type of product	Board material.
Nominal thickness (mm)	8 mm.
Nominal density (kg/m ³)	1300 kg/m ³ ± 10 %.
Nominal mass per unit area (kg/m ²)	10.1 kg/m ² .
Colour	Grey/tan.
Flame retardant treatment added or organic content limited during production	No.



Parameter	Details
European product standard, if applicable	EN 13986 (Wood-based panels for use in construction). EN 634-2 (Cement-bonded particleboards).
Substrate and ventilation conditions	
Substrate	None.
Size of air gap	80 mm.
Type of air gap	Ventilated cavity or free-standing.
Position of air gap	Behind and in front of the test specimen.
Measured sample data	
Mean sample density (kg/m ³)	EN 13823: 1443 kg/m ³ (range 1405 kg/m ³ - 1476 kg/m ³). EN ISO 11925-2: 1441 kg/m ³ (range 1388 kg/m ³ - 1523 kg/m ³).
Mean sample thickness (mm)	EN 13823: 8.07 mm (range 8.02 mm - 8.13 mm). EN ISO 11925-2: 8.00 mm (range 7.72 mm - 8.19 mm).
Mean sample mass per unit area (kg/m ²)	EN 13823: 11.6 kg/m ² (range 11.3 kg/m ² - 12.0 kg/m ²). EN ISO 11925-2: 11.5 kg/m ² (range 11.0 kg/m ² - 12.1 kg/m ²).
Test information	
Face to be tested	Interior face.
Orientation aspects	Note 1.
Test sponsor's sampling identification	Note 1.
Additional information:	None.

Note 1: This information was not supplied by the test sponsor

3 Reports & results in support of this classification

3.1 Description of substrate, fixing and joints

Name of Laboratory	Name of test sponsor	Test reports Nos.	Test method/field of application rules
BRE Global	RCM Limited	295434	EN 13823: 2010 ⁴
BRE Global	RCM Limited	295808	EN ISO 11925-2: 2010 ⁴



3.2 Results

Test method & test number	Parameter	No. test runs	Results	
			Continuous parameter - mean (m)	Compliance with parameters Criterion / Compliance status B-s1, d0
EN 13823: 2010	FIGRA _{0.2MJ}	3	11.5 W/s	≤ 120 W/s / Compliant
	FIGRA _{0.4MJ}		11.5 W/s	≤ 120 W/s / Compliant
	LFS		(-)	≤ edge of specimen / Compliant
	THR _{600s}		1.5 MJ	≤ 7.5 MJ / Compliant
	SMOGRA		0.0 m ² /s ²	≤ 30 m ² /s ² / Compliant
	TSP _{600s}		23.8 m ²	≤ 50 m ² / Compliant
	Flaming droplets/particles ≤ 10s		Not observed	Flaming ≤ 10s / Compliant
	Flaming droplets/particles > 10s		Not observed	Flaming > 10s / Compliant
EN ISO 11925-2: 2010	F _s	6	Not observed	≤ 150 mm within 60s / Compliant
	Flaming droplets/particles		Not observed	No ignition of paper / Compliant

4 Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with EN 13501-1:2007+A1: 2009.

4.2 Classification

The product, RCM Cemboard, in relation to reaction to fire behaviour is classified:

B

The additional classification in relation to smoke production is:

s1

The additional classification in relation to flaming droplets / particles is:

d0

The format of the reaction to fire classification for construction products excluding floorings and linear pipe thermal insulation products is:

Fire Behaviour		Smoke Production			Flaming Droplets	
B	-	s	1	,	d	0

i.e. B-s1, d0



Reaction to fire classification: B-s1, d0

4.3 Field of application

This classification is valid for the following product and mounting and fixing parameters:

Colour	Grey. No variation in colour allowed.
Composition (mm)	Valid for the sample as tested. No variation in composition allowed.
Build up and ordering of layers	Valid for the sample as tested. No variation in the build-up or ordering of layers.
Overall thickness	8 mm \pm 4 %. No variation in thickness allowed.
Overall density / mass per unit area	1300 kg/m ³ \pm 10 % / 10 kg/m ² \pm 10 %. No variation in density or mass per unit area allowed.
Product orientation and geometry	Valid for all orientations.
Joints and exposed edges	Valid for exposed and protected joints and edges.

This classification is valid for the following end -use applications:

- i. A wood-based panel for use in construction mounted freestanding or with a ventilated cavity or directly against a product classified as Class A1 or Class A2-s1, d0 in accordance with EN 13501-1¹, excluding gypsum plasterboard.

5 Limitations

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

The classification assigned to the product in this report is appropriate to a declaration of performance by the manufacturer within the context of system 3 of assessment and verification of constancy of performance and CE marking under the Construction Products Regulation.

The manufacturer has made a declaration, which is held on file. This confirms that the product's design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in order to obtain the classification achieved. As a consequence the manufacturer has concluded that system 3 attestation is appropriate.

The test laboratory has, therefore, played no part in sampling the product for the test, although it holds appropriate references, supplied by the manufacturer, to provide for traceability of the samples tested.



6 References

- 1 EN 13501-1: 2007+A1: 2009. Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests. CEN, Avenue Marnix 17, B-1000 Brussels. 2009.
- 2 EN 634-2: 2007. Cement-bonded particleboards – Specifications – Part 2: Requirements for OPC bonded particleboards for use in dry, humid and external conditions. CEN, Avenue Marnix 17, B-1000 Brussels. 2007.
- 3 EN 13986: 2004. Wood-based panels for use in construction – Characteristics, evaluation of conformity and marking. Reaction to fire tests for products – Non-combustibility test. CEN, Avenue Marnix 17, B-1000 Brussels. 2004.
- 4 EN 13823: 2010. Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item'. CEN, Avenue Marnix 17, B-1000 Brussels. 2010.
- 5 EN ISO 11925-2: 2010. Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test. CEN, Avenue Marnix 17, B-1000 Brussels. 2010.



Appendix A

Test sponsor's product description

Company: PANEL WORLD CO.,LTD	
Parameter	Details
Trade name	
General description	CEMENT BONDED PARTICLE BOARD
Name and address of manufacturer of product	PANEL WORLD CO.,LTD 83/1Moo11 Sethakit 1 Road, Klongmadue, Krathumban, Samutsakorn 74110, Thailand
Place of manufacture	83/1Moo11 Sethakit 1 Road, Klongmadue, Krathumban, Samutsakorn 74110, Thailand
Product reference/number	
Thickness	8 – 24 mm
Density	1300 +/- 10% kg/m ³
Mass per unit area	10-35 kg/m ² (depends on thickness)
Generic type of product	CEMENT BONDED PARTICLE BOARD
Flame retardant treatment added or organic content limited during production (yes/no), if yes give details	No
European product standard, if applicable	EN 13986: 2004
Industry/in-house product standard, if applicable	
Attestation of conformity systems	
Interior facing 1	<ul style="list-style-type: none"> - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant
Core material	<ul style="list-style-type: none"> - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant
Exterior facing 1	<ul style="list-style-type: none"> - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant



Company: PANEL WORLD CO.,LTD	
Parameter	Details
Face to be tested	
Orientation aspects	
Sampling Identification Reference	
Additional information:	