

**bre**global

**Classification of reaction  
to fire performance in  
accordance with BS EN  
13501-1: 2007 +A1: 2009  
on Latium Building  
Products Cladding  
Systems 670/150 and  
DCE/150**

Prepared for:

Latium Building Products  
Billet Lane  
Normanby Enterprise Park  
Normanby Road  
Scunthorpe  
DN15 9YH

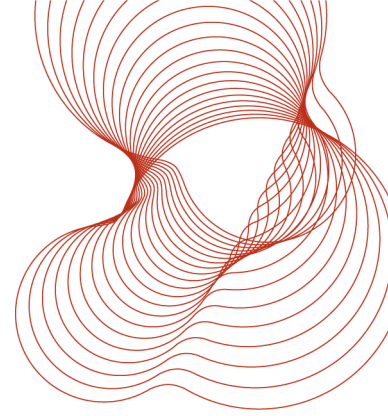
1 May 2013

Test report number 285616  
Issue 1



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Page 1 of 13



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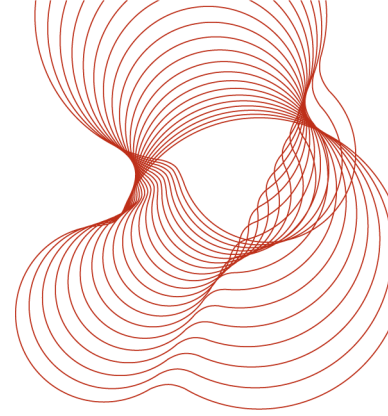
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## 1 Introduction

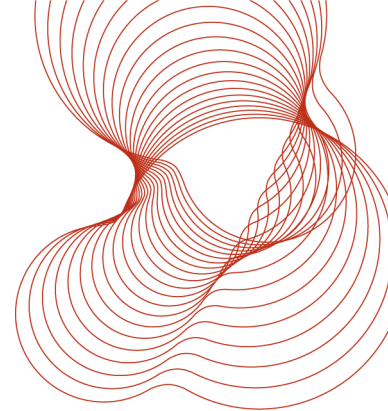
This classification report defines the classification assigned to 'Latium Building Products Cladding Systems 670/150 and DCE/150' in accordance with the procedures given in BS EN 13501-1:2007+A1: 2009

# BRE Global

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

<b>Sponsor:</b>	Latium Building Products, Billet Lane, Normanby Enterprise Park, Normanby Road, Scunthorpe, DN15 9YH.
<b>Prepared for:</b>	Latium Building Products, Billet Lane, Normanby Enterprise Park, Normanby Road, Scunthorpe, DN15 9YH.
<b>Place of Manufacture:</b>	Latium Building Products, Billet Lane, Normanby Enterprise Park, Normanby Road, Scunthorpe, DN15 9YH.
<b>Prepared by:</b>	BRE Global Ltd., Bucknalls Lane, Garston, Watford, WD25 9XX, England.
<b>Product name:</b>	Latium Building Products Cladding Systems 670/150 and DCE/150.  The following unfaced and uncoated products are included within the scope of this report: <ul style="list-style-type: none"><li>• 670/150 (also known as ACS150, C6224150, NPCS150).</li><li>• 671/100 (also known as ACV100, SCV100, NPCV100).</li><li>• C5223150 (also known as SVE150, SVE/150).</li><li>• DCE/150 (also known as DCE150, C5224150, MILEXX150).</li><li>• C5224300 (also known as DCE300, DCE/300, MILEXX300)</li><li>• DFE270 (also known as DFE/270).</li></ul>
<b>Notified body number:</b>	1576.
<b>Classification report No.:</b>	285616
<b>Issue number:</b>	1.
<b>Date of issue:</b>	1 May 2013.

This classification report consists of thirteen pages and may only be used or reproduced in its entirety.



## 2 Details of classified product

### 2.1 General

The products, 'Latium Building Products Cladding Systems 670/150 and DCE/150', are defined by the test sponsor as PVC-UE profiles according to BS EN 13245-2<sup>2</sup>.

### 2.2 Product description

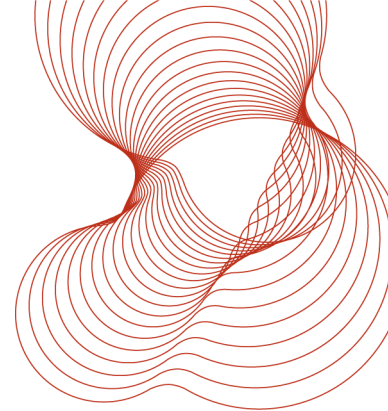
The products, 'Latium Building Products Cladding Systems 670/150 and DCE/150', are described in section 2.2.2.

#### 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

Name and address of test Sponsor	Latium Building Products, Billet Lane, Normanby Enterprise Park, Normanby Road, Scunthorpe, DN15 9YH.
Place of manufacture of product	As above.
<b>Sample</b>	
Description of specimens (as received)	Co-extruded plastic interlocking cladding panel.
Description of specimens (Test sponsor's declaration)	Cellular PVC cladding. The test sponsor's product description is reproduced in Appendix A.
Products/components tested	Latium Building Products Cladding System DCE/150/9001. Latium Building Products Cladding System 670/150/9001.
Sponsor's specimen ID	DCE/150/9001, 670/150/9001 PVC-UE Core & PVC-U Skin.
Type of product / component	Profiles for internal and external wall and ceiling finishes.
Colour reference	9001.
Nominal declared thickness	DCE/150/9001: 7.0 mm. 670/150/9001: 6.0 mm.
Nominal declared mass per unit area	DCE/150/9001: 5.2 kg/m <sup>2</sup> . 670/150/9001: 4.2 kg/m <sup>2</sup> .
Face to be tested	Interior - PVC-U skin.
<b>Substrate</b>	
Generic type	Type A (EN 520 <sup>3</sup> ) gypsum plasterboard.
Product	12.5 mm Knauf Standard Wallboard SE.
Manufacturer	Knauf Drywall, Sittingbourne, Kent, ME9 8SR, UK.
Nominal thickness	12.5 mm.
Measured thickness	12.5 mm.
Nominal mass per unit area	8.3 kg/m <sup>2</sup> .
Nominal density	664 kg/m <sup>3</sup> .
Stated reaction to fire classification	A2-s1, d0 to EN 13501-1 <sup>1</sup> .
<b>Air gap</b>	
Position	Between back face of sample and front face of substrate.
Size of air gap	25 mm.

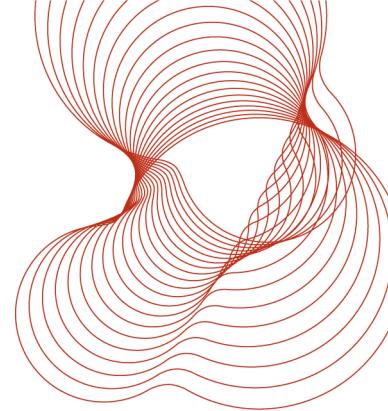


<b>Specimen measurements (EN ISO 11925-2) DCE/150/9001</b>	
Mean measured specimen thickness of profile	<u>Warp orientation</u> Panel: 7.0 mm. Minimum thickness of profile: 5.3 mm. Maximum thickness of profile: 20.5 mm (at interlock). <u>Weft orientation</u> Panel: 6.9 mm. Minimum thickness of profile: 5.3 mm. Maximum thickness across interlocked joint: 20.4 mm.
Mean measured mass per unit area	Warp/weft: 4.1 kg/m <sup>2</sup> .
Specimen cover width	150 mm.
<b>Specimen measurements (EN ISO 11925-2) 670/150/9001</b>	
Mean measured specimen thickness of profile	<u>Warp orientation</u> Panel: 6.0 mm. Minimum thickness of profile: 5.3 mm. Maximum thickness of profile: 17.1 mm (at interlock). <u>Weft orientation</u> Panel: 6.4 mm. Minimum thickness of profile: 5.3 mm. Maximum thickness across interlocked joint: 18.0 mm.
Mean measured mass per unit area	Warp: 2.8 kg/m <sup>2</sup> . Weft: 3.0 kg/m <sup>2</sup> .
Specimen cover width	150 mm.

### 3 Reports & results in support of this classification

#### 3.1 Reports

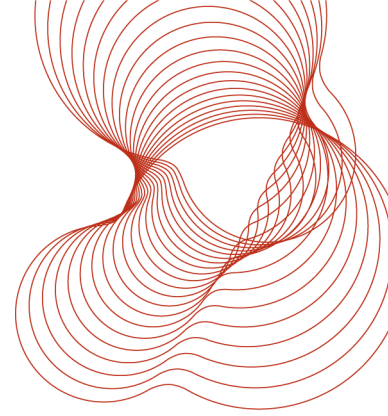
Name of Laboratory	Name of sponsor	Test reports Nos.	Test method/field of application rules
BRE Global	Latium Building Products	280413-1	BS EN 13823: 2010 <sup>4</sup>
BRE Global	Latium Building Products	280413-2	BS EN 13823: 2010 <sup>4</sup>
BRE Global	Latium Building Products	280413-3	BS EN ISO 11925-2: 2010 <sup>5</sup>
BRE Global	Latium Building Products	280413-4	BS EN ISO 11925-2: 2010 <sup>5</sup>



### 3.2 Results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance with parameters (Class D-s3, d2)
<b>EN ISO 11925: 2010</b> Surface exposure, 30s flame application period, DCE/150/9001  (BREG report 280413-4)	Fs ≤ 150	6	(-)	Compliant
	Flaming droplets/particles		(-)	Compliant
<b>EN ISO 11925: 2010</b> Edge exposure, 30s flame application period, DCE/150/9001.  (BREG report 280413-4)	Fs ≤ 150	6	(-)	Compliant
	Flaming droplets/particles		(-)	Compliant
<b>EN ISO 11925: 2010</b> Surface exposure, 30s flame application period, 670/150/9001.  (BREG report 280413-3)	Fs ≤ 150	6	(-)	Compliant
	Flaming droplets/particles		(-)	Compliant
<b>EN ISO 11925: 2010</b> Edge exposure, 30s flame application period, 670/150/9001.  (BREG report 280413-3)	Fs ≤ 150	6	(-)	Compliant
	Flaming droplets/particles		(-)	Compliant
<b>EN 13823: 2010</b> DCE/150/9001   (BREG report 280413-2)	FIGRA <sub>0.2MJ</sub> FIGRA <sub>0.4MJ</sub> LFS THR 600s	3	205.5 W/s 205.5 W/s (-) 21.8 MJ	Compliant Compliant Compliant Compliant
	SMOGRA TSP600s		180.2 m <sup>2</sup> /s <sup>2</sup> 1441.4 m <sup>2</sup>	Compliant Compliant
	Flaming droplets/particles ≤ 10s Flaming droplets/particles > 10s		Observed Observed	Compliant Compliant
<b>EN 13823: 2010</b> 670/150/9001   (BREG report 280413-1)	FIGRA <sub>0.2MJ</sub> FIGRA <sub>0.4MJ</sub> LFS THR 600s	3	257.8 W/s 257.8 W/s (-) 16.8 MJ	Compliant Compliant Compliant Compliant
	SMOGRA TSP600s		288.9 m <sup>2</sup> /s <sup>2</sup> 1268.0 m <sup>2</sup>	Compliant Compliant
	Flaming droplets/particles ≤ 10s Flaming droplets/particles > 10s		Observed Observed	Compliant Compliant

(-) Not applicable



## 4 Classification and field of application

### 4.1 Reference of classification

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

### 4.2 Classification

The product, 'Latium Building Products Cladding Systems 670/150 and DCE/150', in relation to reaction to fire behaviour is classified:

**D**

The additional classification in relation to smoke production is:

**s3**

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

**d2**

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>D</b>	-	<b>s</b>	<b>3</b>	,	<b>d</b>	<b>2</b>	

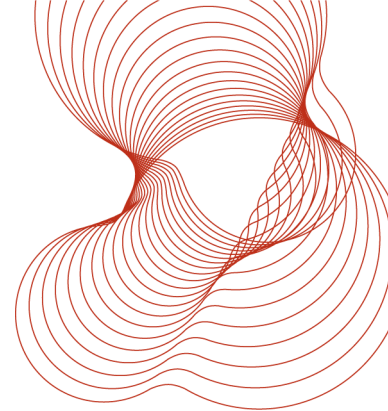
i.e. **D-s3, d2/AVM**

**Reaction to fire classification: D-s3, d2/AVM**

### 4.3 Field of application

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

Colour	Valid for all colours.
Composition (amount of inorganic fillers)	Valid for all profiles with a higher amount of inorganic fillers.
Mass per unit area	Valid for all profiles with a mass per unit area $\geq 4.2 \text{ kg/m}^2$ and $\leq 5.2 \text{ kg/m}^2$ .
Build up	No variation in build-up allowed.
Orientation	Valid for all applications.
Distance between consecutive fixings	For distances of $\leq 0.6 \text{ m}$ between fixings.
Air gap	Valid for an air gap of $\leq 25 \text{ mm}$ or mounted without an air gap (i.e. directly onto the wall).
Type of spacers	Valid for all spacers of equal or higher reaction to fire class than untreated wood.



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

- i. Unplasticized cellular polyvinyl chloride (PVC-UE) profiles for internal and external wall and ceiling finishes fixed onto spacers with an air gap behind using either mechanical fixings or adhesive.
- ii. The classification is applicable to all A1 and A2 substrates (classified in accordance with EN 13501-1<sup>1</sup>) with a density of  $\geq 498 \text{ kg/m}^3$ , including gypsum plasterboard.

## 5 Limitations

This 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 conformity by the manufacturer within the context of system 3 attestation of conformity and CE marking under the Construction Products Directive.

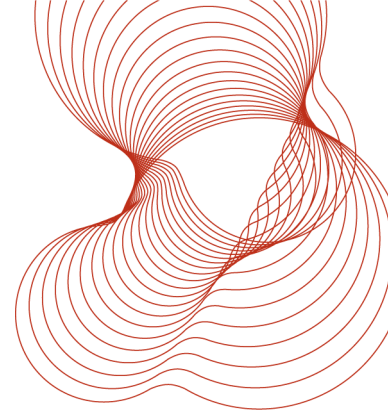
The manufacturer has made a declaration, which is held on file. This confirms that the products design requires no specific processes, procedures or stages (e.g. no addition of flame-retardants, limitation of organic content, or addition of fillers) that are aimed at enhancing the fire performance in 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.

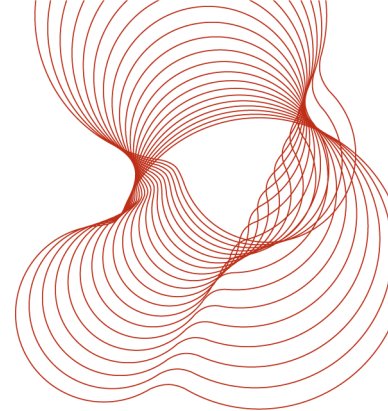
## 6 References

1. BS EN 13501-1: 2007+A1: 2009. Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests. BSI, 389 Chiswick High Road, London, W4 4AL. 2009.
2. BS EN 13245-2: 2008 Incorporating corrigenda November 2009 and August 2010. Plastics – Unplasticized poly (vinyl chloride) (PVC-U) profiles for building applications. Part 2: PVC-U profiles and PVC-UE profiles for internal and external wall and ceiling finishes. BSI, 389 Chiswick High Road, London, W4 4AL. 2010.
3. BS EN 520: 2004 + A1: 2009 Incorporating Corrigendum July 2006. 'Gypsum plasterboards - Definitions, requirements and test methods'. BSI, 389 Chiswick High Road, London, W4 4AL. 2009.
4. BS EN 13823: 2010. Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item. BSI, 389 Chiswick High Road, London, W4 4AL. 2010.





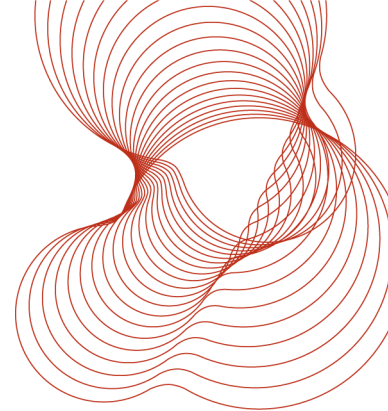
5. BS EN ISO 11925-2: 2010. 'Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-source test'. BSI, 389 Chiswick High Road, London, W4 4AL. 2010.



## Appendix A

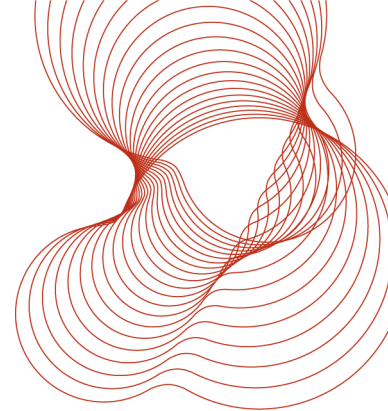
**Table A.1: Test sponsor's product description DCE/150/9001**

<b>Company: Latium Building Products Limited</b>	
<b>Parameter</b>	<b>Details</b>
Trade name	Latium Building Products Cladding System
General description	Cellular PVC Cladding - (Family A)
Name and address of manufacturer of product	Latium Building Products Ltd, Billet Lane, Normanby Enterprise Park, Normanby Rd, Scunthopre, DN15 9YH.
Place of manufacture	As above - DN15 9YH.
Product reference/number	<b>DCE/150/9001</b> - PVC-UE Core & PVC-U Skin
Thickness	7 mm
Density	0.4 kg/m
Mass per unit area	5.2 kg/m <sup>2</sup>
Generic type of product	Profiles for internal & external wall & ceiling finishes
Flame retardant treatment added or organic content limited during production (yes/no), if yes give details	Yes - See Note 1
European product standard, if applicable	BS EN 13245-2 2008
Industry/in-house product standard, if applicable	BS7619-2010 now superseded by BS EN 1324-2
Attestation of conformity systems	BS Kitemark, British Board of Agreement Cert
Interior facing 1 - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - amount of inorganic filler - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	Profiles for internal & external wall & ceiling finishes. DCE/150 Latium Building Products Ltd 7 mm 5.2 kg/m <sup>2</sup> 9001 See Note 1 n/a n/a n/a
Interior facing 2 - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	n/a n/a n/a n/a n/a n/a n/a n/a n/a



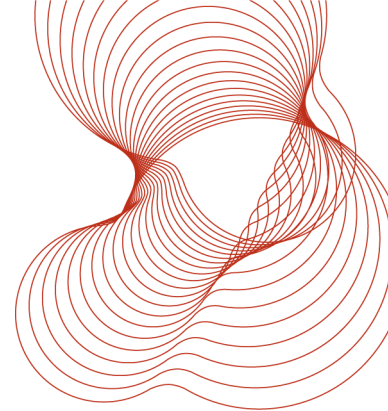
Company: Latium Building Products Limited	
Parameter	Details
Core material	<ul style="list-style-type: none"> <li>- Generic type n/a</li> <li>- Product reference n/a</li> <li>- Manufacturer n/a</li> <li>- Thickness n/a</li> <li>- Mass per unit area/density n/a</li> <li>- Colour reference n/a</li> <li>- Trade name flame retardant n/a</li> <li>- Generic type flame retardant n/a</li> <li>- Amount flame retardant n/a</li> </ul>
Exterior facing 2-	<ul style="list-style-type: none"> <li>- Generic type n/a</li> <li>- Product reference n/a</li> <li>- Manufacturer n/a</li> <li>- Thickness n/a</li> <li>- Mass per unit area/density n/a</li> <li>- Colour reference n/a</li> <li>- Trade name flame retardant n/a</li> <li>- Generic type flame retardant n/a</li> <li>- Amount flame retardant n/a</li> </ul>
Exterior facing 1-	<ul style="list-style-type: none"> <li>- Generic type n/a</li> <li>- Product reference n/a</li> <li>- Manufacturer n/a</li> <li>- Thickness n/a</li> <li>- Mass per unit area/density n/a</li> <li>- Colour reference n/a</li> <li>- Trade name flame retardant n/a</li> <li>- Generic type flame retardant n/a</li> <li>- Amount flame retardant n/a</li> </ul>
Adhesive	<ul style="list-style-type: none"> <li>- Generic type n/a</li> <li>- Product reference n/a</li> <li>- Manufacturer n/a</li> <li>- Application rate n/a</li> <li>- Application method n/a</li> <li>- Specific gravity n/a</li> <li>- Colour reference n/a</li> <li>- Trade name flame retardant n/a</li> <li>- Generic type flame retardant n/a</li> <li>- Amount flame retardant n/a</li> </ul>
Face to be tested	PVC-U Skin
Orientation aspects	Vertical + Warp & Weft - Face & Edge
Sampling Identification Reference	Latium BP - CE Mark - Euroclass Fire Testing
Additional information:	<b>Testing to achieve Euroclass C or D</b>

Note 1: This commercially sensitive information has been disclosed at the request of the test sponsor. The information will be retained in confidence on the BRE Global laboratory file.



**Table A.2: Test sponsor's product description 670/150/9001**

<b>Company: Latium Building Products Limited</b>	
<b>Parameter</b>	<b>Details</b>
Trade name	Latium Building Products Cladding System
General description	Cellular PVC Cladding - (Family A)
Name and address of manufacturer of product	Latium Building Products Ltd, Billet Lane, Normanby Enterprise Park, Normanby Rd, Scunthopre, DN15 9YH.
Place of manufacture	As above - DN15 9YH.
Product reference/number	<b>670/150/9001</b> - PVC-UE Core & PVC-U Skin
Thickness	6 mm
Density	0.4 kg/m
Mass per unit area	4.2 kg/m <sup>2</sup>
Generic type of product	Profiles for internal & external wall & ceiling finishes
Flame retardant treatment added or organic content limited during production (yes/no), if yes give details	Yes - See Note 1
European product standard, if applicable	BS EN 13245-2 2008
Industry/in-house product standard, if applicable	BS7619-2010 now superseded by BS EN 1324-2
Attestation of conformity systems	BS Kitemark, British Board of Agreement Cert
Interior facing 1 - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - amount of inorganic filler - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	Profiles for internal & external wall & ceiling finishes. 670/150 Latium Building Products Ltd 6 mm 4.2 kg/m <sup>2</sup> 9001 See Note 1 n/a n/a n/a
Interior facing 2 - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	n/a n/a n/a n/a n/a n/a n/a n/a n/a
Core material - Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	n/a n/a n/a n/a n/a n/a n/a n/a n/a
Exterior facing 2- Generic type	n/a



Company: Latium Building Products Limited	
Parameter	Details
- Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	n/a n/a n/a n/a n/a n/a n/a n/a
Exterior facing 1- Generic type - Product reference - Manufacturer - Thickness - Mass per unit area/density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	n/a n/a n/a n/a n/a n/a n/a n/a
Adhesive - Generic type - Product reference - Manufacturer - Application rate - Application method - Specific gravity - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	n/a n/a n/a n/a n/a n/a n/a n/a n/a
Face to be tested	PVC-U Skin
Orientation aspects	Vertical + Warp & Weft - Face & Edge
Sampling Identification Reference	Latium BP - CE Mark - Euroclass Fire Testing
Additional information:	<b>Testing to achieve Euroclass C or D</b>

Note 1: This commercially sensitive information has been disclosed at the request of the test sponsor. The information will be retained in confidence on the BRE Global laboratory file.

=====REPORT ENDS=====