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CLASSIFICATION REPORT

Classification of reaction to fire performance in accordance with BS EN 13501-1:2018 on Smart Architectural Aluminium

Prepared for: Smart Systems Limited
Date: 15.10.2026
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UKAS TESTING
0578

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1.Introduction

This classification report defines the classification assigned to 'Smart Architectural Aluminium' in accordance with the procedures given in BS EN 13501-1: 2018[1].

CLASSIFICATION OF REACTION TO FIRE

IN ACCORDANCE WITH BS EN 13501-1: 2018

Sponsor:	Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom
Prepared for:	Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom
Manufacturer:	Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom
Place of Manufacture:	Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom
Prepared by:	BRE Global, Bucknalls Lane, Garston, Watford, Hertfordshire, WD25 9XX, UK
UK Approved Body No.:	0832
Product name:	Smart Architectural Aluminium
Classification report No.:	P130557-1002
Issue number:	Two
Date of issue:	15 October 2026

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2. Details of classified product

2.1 General

The product, 'Smart Architectural Aluminium,' is defined by the test sponsor as a metal faced insulated panel.

2.2 Product description

The product, 'Smart Architectural Aluminium,' is described in section 2.2.2.

2.2.1. Traceability

The test sample was supplied by the test sponsor. BRE Global was not involved in the sampling process and therefore cannot comment upon the relationship between the sample supplied for test and the product supplied to market. The results apply to the sample as received.

2.2.2. Sample details

Unless otherwise stated all measurements are nominal.

Parameter	Details
Test sponsor	Smart Systems Ltd. Arnolds Way Yatton North Somerset BS49 4QN United Kingdom
Prepared for	Smart Systems Ltd. Arnolds Way Yatton North Somerset BS49 4QN United Kingdom
Manufacturer of sample	Smart Systems Ltd. Arnolds Way Yatton North Somerset BS49 4QN United Kingdom
Place of manufacture	As above
Trade name	Smart Architectural Aluminium
Sample reference	Smart Architectural Aluminium
Sample descriptions (as provided by test sponsor)	Stonewool lamellae core with open filament net facings, adhered to metal panels coated with a polyester powder coating, using a polyurethane two-part adhesive. The test sponsor's product description and photographs of the insulation component as received are shown in Appendix A of this report.

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Parameter	Details
Description of samples (as received)	The following samples were received: • A black powder coated metal-faced panel with a yellow/green mineral wool core. • A red powder coated metal-faced panel with a yellow/green mineral wool core. • A white powder coated metal-faced panel with a yellow/green mineral wool core. The mineral wool batt had off-white mesh facings. The silver-coloured metal facings, had a measured thickness of approximately 1.4 mm. The internal facings adjacent to the mineral wool core had a white-coloured coating. The following 1716 test samples were received: • A black powder. • A red powder. • A white powder. • Two vials of viscous brown liquid. The following text was printed on the label: o Loctite UK 5400. o Hardener. o 5 grams. • One vial of beige viscous liquid. The following text was printed on the label: o Loctite UK 8103. o PU adhesive. • A yellow/green mineral wool batt with off-white mesh facings. • Silver-coloured metal facings, with a measured thickness of 1.4 mm. The test specimens as received are shown in Appendix A of this report.
Test sponsor's product data	
Generic type of product	Metal faced insulated panel
Nominal thickness (mm)	28
Nominal density (kg/m³)	Note 1
Nominal mass per unit area (kg/m²)	12.73
Colour	Red, black, and white variants tested.
Flame retardant treatment added, or organic content limited during production	No
European product standard, if applicable, based on the information supplied by the test sponsor	Note 1
Coating system	
Generic type of product	Polyester powder coating

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Parameter	Details
Manufacturer of coating samples	AkzoNobel Powder Coatings
Place of manufacture of coating samples	Note 1
Trade name of coating (as provided by test sponsor)	Interpon D1036 Matt, Interpon D1036 Gloss, Interpon D2525 Gloss, Interpon D2525 Matt
Sample reference of coating	Black: KL008 Red: KL002 White: KL009
Physical appearance	Black, red, and white powders.
Nominal thickness of coating (mm)	0.06
Nominal mass per unit area of coating (kg/m²)	0.125 per skin
Specific gravity of coating (kg/m³)	1.2 - 1.9 g/cm³, depending on colour
Colour	Black, red, and White
Mineral wool insulation	
Generic type of product	Mineral wool insulation
Trade name of mineral wool core (as provided by test sponsor)	Nexus Core
Manufacturer of mineral wool insulation core	Siderise
Place of manufacture of mineral wool insulation core	Note 1
Sample reference of mineral wool	Nexus Core
Physical appearance	A nominal 25 mm-thick yellow/green mineral wool batt with off-white open filament net facings, measuring approximately 1199 mm-long by 990 mm-wide.
Nominal thickness of insulation (mm)	25 (± 0.5)
Nominal mass per unit area of insulation (kg/m²)	4.1
Nominal effective density of insulation (kg/m³)	164
Colour	Yellow/green
Facings on mineral wool insulation core	
Generic type of product	Open filament net - Polymeric
Colour	Off-white
Nominal thickness of net facings (mm)	Note 1
Nominal mass per unit area of net facings (g/m²)	Note 1
Nominal density of net facings (kg/m³)	Note 1
Adhesive	
Generic type of product	PU adhesive
Manufacturer of adhesive sample (Loctite)	Henkel AG & Co. KGaA Headquarters in Düsseldorf Henkelstraße 67 40589 Düsseldorf Germany
Place of manufacture of adhesive sample	Note 1

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Parameter	Details
Trade name of adhesive (as provided by test sponsor)	Loctite® UK 8103 /Loctite® UK 5400
Sample reference of adhesive	Loctite® UK 8103 /Loctite® UK 5400
Technology	Polyurethane
Cure	Polyaddition
Components	Two-component • Component A: Resin. • Component B: Hardener.
Mixing ratio by weight (Comp. A: Comp. B)	5:1
Mixing ratio by volume (Comp. A: Comp. B)	3.7:1
Physical appearance	Beige and brown viscous liquids
Nominal thickness of adhesive (mm)	0.17
Nominal mass per unit area of adhesive (kg/m²)	0.100 per skin
Nominal density of adhesive (g/cm³)	Component A: 1.6 – 1.7 Component B: 1.17 – 1.27
Viscosity of adhesive @ 20 °C (mPas M-10)	Component A: 24000 – 30000 Component B: 250 – 350 Mixture: 8000 - 10000
Metal facings	
Generic type	Aluminium
Nominal thickness of metal facings (mm)	1.5
Nominal mass per unit area of metal facings (kg/m²)	4.065
Nominal density of metal facings (kg/m³)	2710
Measured thickness of metal facings (mm)	1.38
Substrate and ventilation conditions	
Generic type	Calcium silicate
Nominal thickness (mm)	12
Nominal density (kg/m³)	870 ± 50
Nominal mass per unit area (kg/m²)	10.44 ± 0.6
Preparation, if any	None
Air gap	
Type and size of air gap	80 mm ventilated cavity
Position of air gap	Behind the sample under test
Measured sample data	
Product, Red coated panel, determined by BRE Global @ 23 °C ± 2 °C and 50 % ± 5 % RH	
Mean sample density (kg/m³)	458.3 (Range 396.4 to 505.6)
Mean sample thickness (mm)	27.64 (Range 26.33 to 28.98)
Mean sample mass per unit area (kg/m²)	12.63 (Range 11.47 to 13.31)
Product, Black coated panel, determined by BRE Global @ 23 °C ± 2 °C and 50 % ± 5 % RH	
Mean sample density (kg/m³)	463.8 (Range 457.3 to 468.9)

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Parameter	Details
Mean sample thickness (mm)	27.59 (Range 27.40 to 27.82)
Mean sample mass per unit area (kg/m²)	12.80 (Range 12.56 to 12.95)
Product, White coated panel, determined by BRE Global @ 23 °C ± 2 °C and 50 % ± 5 % RH	
Mean sample density (kg/m³)	465.4 (Range 453.5 to 473.8)
Mean sample thickness (mm)	27.74 (Range 27.62 to 27.83)
Mean sample mass per unit area (kg/m²)	12.91 (Range 12.60 to 13.11)
Component - Coating and adhesive, determined by BRE Global @ 23 °C ± 2 °C and 50 % ± 5 % RH	
Mean sample density (kg/m³)	Not measured
Mean sample thickness (mm)	Not measured
Mean sample mass per unit area (kg/m²)	Not measured
Component - Stonewool, determined by BRE Global @ 23 °C ± 2 °C and 50 % ± 5 % RH	
Mean sample density (kg/m³)	178.3
Mean sample thickness (mm)	24.35 (Range 24.11 to 24.55)
Mean sample mass per unit area (kg/m²)	4.34
Component - Open filament net facing, determined by BRE Global @ 23 °C ± 2 °C and 50 % ± 5 % RH	
Mean sample density (kg/m³)	141.8
Mean sample thickness (mm)	0.17 (Range 0.16 to 0.18)
Mean sample mass per unit area (g/m²)	23.93
Component - Stonewool with open filament net facing, determined by BRE Global @ 23 °C ± 2 °C and 50 % ± 5 % RH	
Mean sample density (kg/m³)	179.9
Mean sample thickness (mm)	24.43 (Range 24.30 to 24.49)
Mean sample mass per unit area (kg/m²)	4.40
Gross heat of combustion data, reference P130557-1000 based on stated mass per unit and thickness data	
Black polyester powder coating	21.30 MJ/kg , 2.6630 MJ/m² @ 0.125 kg/m².
Red polyester powder coating	18.29 MJ/kg, 2.2866 MJ/m² @ 0.125 kg/m².
White polyester powder coating	19.27 MJ/kg, 2.4091 MJ/m² @ 0.125 kg/m².
Cured adhesive	15.52 MJ/kg, 1.5516 MJ/m² @ 0.1 kg/m².
Mineral fibre insulation	1.11 MJ/kg, 4.5461 MJ/m² @ 4.10 kg/m².
Open net filament	44.16 MJ/kg, 1.0568 MJ/m² @ 23.93 g/m².
Internal non-substantial component (adhesive and adjacent net reinforcement on insulation)	2.6084 MJ/m²
External non-substantial coating, Black polyester coating	21.3037 MJ/kg, 2.6630 MJ/m² @ 0.125 kg/m²
External non-substantial coating, Red polyester coating	18.2924 MJ/kg, 2.2866 MJ/m² @ 0.125 kg/m²
External non-substantial coating, White polyester coating	19.2726 MJ/kg, 2.4091 MJ/m² @ 0.125 kg/m²
Whole product, Black polyester coating	1.19 MJ/kg, 15.0888 MJ/m² @ 12.73 kg/m²

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Parameter	Details
Whole product, Red polyester coating	1.13 MJ/kg, 14.3360 MJ/m² @ 12.73 kg/m²
Whole product, White polyester coating	1.15 MJ/kg, 14.5810 MJ/m² @ 12.73 kg/m²
Test information	
Face to be tested	Coated surface
Orientation aspects	The product was symmetrical about the insulation core.
Test sponsor's sampling identification	Note 1
BRE Global sample number	E16273, E16274, E16275, E16363, E16364, E16365
Additional information	Note 1

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

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3.Reports and results in support of this classification

3.1 Reports

Name of Laboratory	Name of test sponsor	Test reports Nos.	Test method/field of application rules
BRE Global	Smart Systems Ltd	P130557-1000 Issue 2	BS EN ISO 1716[2]
BRE Global	Smart Systems Ltd	P130557-1001 Issue 2	BS EN 13823[3]

3.2 Results

Test method & test number	Parameter	No. test runs	Results	
			Continuous parameter - mean (m)	Compliance with parameters Criterion / Compliance status, A2-s1, d0
BS EN ISO 1716 P130557-1000 Product, E16256 Black polyester powder coating (External non-substantial component) Tested: 06/10/25 to 24/10/25	Q_{PCS}	3	21.30 MJ/kg	- / -
	Q_{PCSs} @ 0.125 kg/m²		2.66 MJ/m²	$Q_{PCSs} \leq$ 4.0 MJ/m² / Compliant
BS EN ISO 1716 P130557-1000 Product, E16257 Red polyester powder coating (External non-substantial component) Tested: 06/10/25 to 24/10/25	Q_{PCS}	3	18.29 MJ/kg	- / -
	Q_{PCSs} @ 0.125 kg/m²		2.29 MJ/m²	$Q_{PCSs} \leq$ 4.0 MJ/m² / Compliant
BS EN ISO 1716 P130557-1000 Product, E16258 White polyester powder coating (External non-substantial component) Tested: 06/10/25 to 24/10/25	Q_{PCS}	3	19.27 MJ/kg	- / -
	Q_{PCSs} @ 0.125 kg/m²		2.41 MJ/m²	$Q_{PCSs} \leq$ 4.0 MJ/m² / Compliant
BS EN ISO 1716 P130557-1000 Product, E16259 Cured adhesive Tested: 06/10/25 to 24/10/25	Q_{PCS}	3	15.52 MJ/kg	- / -
	Q_{PCSs} @ 0.1 kg/m²		1.55 MJ/m²	- / -
BS EN ISO 1716 P130557-1000 Product, E16276 MW insulation (substantial component) Tested: 06/10/25 to 24/10/25	Q_{PCS}	3	1.11 MJ/kg	$Q_{PCS} \leq$ 3.0 MJ/kg / Compliant
	Q_{PCSs} @ 4.10 kg/m²		4.55 MJ/m²	- / -

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Test method & test number	Parameter	No. test runs	Results	
			Continuous parameter - mean (m)	Compliance with parameters Criterion / Compliance status, A2-s1, d0
BS EN ISO 1716 P130557-1000 Product, E16277 Net facings Tested: 06/10/25 to 24/10/25	Q_{PCS}	3	44.16 MJ/kg	- / -
	Q_{PCSs} @ 23.93 g/m²		1.06 MJ/m²	- / -
BS EN ISO 1716 Internal non-substantial component (adhesive and adjacent net reinforcement)	Q_{PCS}	-	21.05 MJ/kg	- / -
	Q_{PCSs} @ 0.12 kg/m²		2.61 MJ/m²	$Q_{PCS} \leq$ 4.0 MJ/kg / Compliant
BS EN ISO 1716 Aluminium facing (Substantial component) Deemed to satisfy in accordance with BS EN ISO 1716[2]	Q_{PCS}	-	0.0 MJ/kg	$Q_{PCS} \leq$ 3.0 MJ/kg / Compliant
	Q_{PCSs} @ 4.1 kg/m²		0.0 MJ/m²	- / -
BS EN ISO 1716 Whole product (Black)	Q_{PCS}	-	1.19 MJ/kg	$Q_{PCS} \leq$ 3.0 MJ/kg / Compliant
	Q_{PCSs} @ 12.73 kg/m²		15.09 MJ/m²	- / -
BS EN ISO 1716 Whole product (Red)	Q_{PCS}	-	1.13 MJ/kg	$Q_{PCS} \leq$ 3.0 MJ/kg / Compliant
	Q_{PCSs} @ 12.73 kg/m²		14.34MJ/m²	- / -
BS EN ISO 1716 Whole product (White)	Q_{PCS}	-	1.15 MJ/kg	$Q_{PCS} \leq$ 3.0 MJ/kg / Compliant
	Q_{PCSs} @ 12.73 kg/m²		14.58 MJ/m²	- / -

Test method & test number	Parameter	No. test runs	Results	
			Continuous parameter - mean (m)	Compliance with parameters Criterion / Compliance status, A2-s1, d0
BS EN 13823 Smart Architectural Aluminium (Black) Tested: 21 Jan..26 & 27 Jan. 26 E16365 / E16275 P130557-1001	FIGRA $_{0.2MJ}$ FIGRA $_{0.4MJ}$ LFS THR $_{600s}$	3	60.5 W/s 57.3 W/s (-) 2.1 MJ	FIGRA $_{0.2MJ} \leq$ 120 W/s / Compliant - / - LFS ≤ Edge specimen / Compliant THR $_{600s} \leq$ 7.5 MJ / Compliant
	SMOGRA TSP_{600s}		11.2 m²/s² 49.6 m²	SMOGRA ≤ 30 m²/s² / Compliant $TSP_{600s} \leq$ 50 m² / Compliant
	Flaming droplets/particles ≤ 10s Flaming droplets/particles > 10s		Not observed Not observed	None / Compliant None / Compliant

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Test method & test number	Parameter	No. test runs	Results	
			Continuous parameter - mean (m)	Compliance with parameters Criterion / Compliance status, A2-s1, d0
BS EN 13823 Smart Architectural Aluminium (Red) Tested: 21 Jan. .26 E16364 / E16274 P130557-1001	FIGRA $_{0.2MJ}$ FIGRA $_{0.4MJ}$ LFS THR $_{600s}$	1	48.9 W/s 48.8 W/s (-) 1.9 MJ	FIGRA $_{0.2MJ}$ ≤ 120 W/s / Compliant - / - LFS ≤ Edge specimen / Compliant THR $_{600s}$ ≤ 7.5 MJ / Compliant
	SMOGRA TSP_{600s}		0.0 m²/s² 29.4 m²	SMOGRA ≤ 30 m²/s² / Compliant TSP_{600s} ≤ 50 m² / Compliant
	Flaming droplets/particles ≤ 10s Flaming droplets/particles > 10s		Not observed Not observed	None / Compliant None / Compliant

Test method & test number	Parameter	No. test runs	Results	
			Continuous parameter - mean (m)	Compliance with parameters Criterion / Compliance status, A2-s1, d0
BS EN 13823 Smart Architectural Aluminium (White) Tested: 21 Jan..26 & 20 Aug. 26 E16363 / E16273 P130557-1001	FIGRA $_{0.2MJ}$ FIGRA $_{0.4MJ}$ LFS THR $_{600s}$	3	86.1 W/s 83.1 W/s (-) 2.2 MJ	FIGRA $_{0.2MJ}$ ≤ 120 W/s / Compliant - / - LFS ≤ Edge specimen / Compliant THR $_{600s}$ ≤ 7.5 MJ / Compliant
	SMOGRA TSP_{600s}		7.0 m²/s² 45.2 m²	SMOGRA ≤ 30 m²/s² / Compliant TSP_{600s} ≤ 50 m² / Compliant
	Flaming droplets/particles ≤ 10s Flaming droplets/particles > 10s		Not observed Not observed	None / Compliant None / Compliant

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4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with BS EN 13501-1: 2018.

4.2 Classification

The product, 'Smart Architectural Aluminium,' in relation to reaction to fire behaviour is classified:

A2

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	
A2	-	s	1	,	d	0

i.e., A2-s1, d0

Reaction to fire classification: A2-s1, d0

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

4.3 Field of application

This classification is valid for:

i) Metal faced insulated panel.

And the following product and mounting and fixing parameters:

Parameter	Field of application
Colour	Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Type of product	Metal-faced insulated panel. Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Finish	Smooth. Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Composition, including additives and flame retardant	Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Type of facing	Polyester coated aluminium sheet. Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Overall thickness	Nominal 30 mm. BRE measured 27.6 to 27.7 mm. Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.

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Parameter	Field of application
Thickness of components	Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Density	Note 1. BRE measured 458-465 kg/m³ @ thicknesses between 27.6 mm and 27.7 mm. Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Nominal overall mass per unit area	Nominal 12.73 kg/m². BRE measured 12.63 to 12.91 kg/m²). Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Mass per unit area of components	Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Build-up and ordering of layers	Valid as tested, no variation allowed. See Section 2.2 and Appendix A of this report.
Product orientation and geometry	Symmetrical panel.
Joints and exposed edges	Valid for protected joints and edges.

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

i) Mounted free-standing, with no material either in front or behind.

5. Limitations

This report is Issue 2 of BRE Global report P130557-1002. A correction has been made to the panel thickness detailed in section 2.2 and in the test sponsor's product definition in Appendix A of this classification report. BRE Global report P130557-1002 Issue 1, dated 07 September 2026, has been withdrawn with effect from the date of this report. Note that the product has not been retested and this re issue does not involve a technical change to the product or a technical review of the original classification report.

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 of AVCP and UKCA and/or CE marking under the Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011, as adopted, laying down harmonised conditions for the marketing of construction products.

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.

The information in Section 2.2.2 of this report, other than that indicated otherwise, was supplied by the test sponsor, and was not independently verified by BRE Global. The validity of the results is conditional on the accuracy of that data.

Because of the nature of reaction to fire testing and the consequent difficulty in quantifying the uncertainty of measurement of reaction to fire, it is not possible to provide a stated degree of accuracy of the results.

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6. References

1. BS EN 13501-1: 2018. Fire classification of construction products and building elements. Part 1: Classification using data from reaction to fire tests. BSI, London. 2019.

2. BS EN ISO 1716: 2018. Reaction to fire tests for products - Determination of the gross heat of combustion (calorific value). BSI, London. 2018.

3. BS EN 13823: 2020 + A1: 2022. Reaction to fire tests for building products - Building products excluding floorings exposed to the thermal attack by a single burning item. BSI, London. 2023.

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Appendix A – Sample description

Table A.1 Test sponsor's product description

Test sponsor (Company name and address): Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom	
Parameter	**Details (if applicable)**
Trade name	Smart Architectural Aluminium
General description	Stonewool lamellae core with open filament net facings, adhered to metal panels coated with a polyester powder coating, using a polyurethane two-part adhesive.
Name and address of manufacturer of product	Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom
Place of manufacture	As above
Product reference/number	Smart Architectural Aluminium
Thickness	28
Density	Note 1
Mass per unit area	12.73
Generic type of product	Metal faced insulated panel
Flame retardant treatment added or organic content limited during production (yes/no), if yes give details	No
Harmonised EN product standard, and AVCP System No. if applicable	Note 1
Industry/in-house product standard, if applicable	Note 1
Interior facing 1 (Test face) - Generic type - Product references - Manufacturer - Thickness - Mass per unit area/ density - Colour reference - Trade name flame retardant - Generic type flame retardant - Amount flame retardant	Polyester powder coating Interpon D1036 Matt, Interpon D1036 Gloss, Interpon D2525 Gloss, Interpon D2525 Matt AkzoNobel Powder Coatings 0.06 mm 0.125 kg/m², 1.2 - 1.9 g/cm³, depending on colour Black: KL008, Red: KL002, White: KL009 Note 1 Note 1 Note 1
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	Aluminium sheet Note 1 Note 1 1.5 mm 4.065 kg/m², 2710 kg/m³ Silver Note 1 Note 1 Note 1

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Test sponsor (Company name and address): Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom	
Parameter	**Details (if applicable)**
Interior facing 3 - Generic type	PU adhesive
- Product reference	Loctite® UK 8103 /Loctite® UK 5400
- Manufacturer	Henkel AG & Co. KGaA
- Application rate	0.1 kg/m² (Dry, cured)
- Mixing ratio by weight (Comp. A: Comp. B)	5:1
- Mixing ratio by volume (Comp. A: Comp. B)	3.7:1
- Application thickness	0.17 mm (Dry, cured)
- Specific gravity (g/cm³)	Component A: 1.6 – 1.7 Component B: 1.17 – 1.27
- Colour reference	Beige / Brown
- Trade name flame retardant	Note 1
- Generic type flame retardant	Note 1
- Amount flame retardant	Note 1
Interior facing 4 - Generic type	Open filament net - Polymeric
- Product reference	Nexus Core
- Manufacturer	Siderise
- Thickness	Note 1: 0.17 (Range 0.16 to 0.18) mm (Measured by BRE)
- Mass per unit area/density	Note 1: 141.8 kg/m³, 23.93 g/m² (Measured by BRE)
- Colour reference	Note 1: Off-white (observed by BRE)
- Trade name flame retardant	Note 1
- Generic type flame retardant	Note 1
- Amount flame retardant	Note 1
Core material - Generic type	Mineral wool insulation
- Product reference	Nexus Core
- Manufacturer	Siderise
- Thickness	25 (± 0.5) mm
- Mass per unit area/density	4.1 kg/m², 164 kg/m³
- Colour reference	Yellow/green
- Trade name flame retardant	Note 1
- Generic type flame retardant	Note 1
- Amount flame retardant	Note 1
Exterior facing 4 - Generic type	Open filament net - Polymeric
- Product reference	Nexus Core
- Manufacturer	Siderise
- Thickness	0.17 (Range 0.16 to 0.18) mm (Measured by BRE)
- Mass per unit area/density	Note 1: 141.8 kg/m³, 23.93 g/m² (Measured by BRE)
- Colour reference	Note 1: Off-white (observed by BRE)
- Trade name flame retardant	Note 1
- Generic type flame retardant	Note 1
- Amount flame retardant	Note 1

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Test sponsor (Company name and address): Smart Systems Ltd., Arnolds Way, Yatton, North Somerset, BS49 4QN, United Kingdom	
Parameter	**Details (if applicable)**
Exterior facing 3 - Generic type	PU adhesive
- Product reference	Loctite® UK 8103 /Loctite® UK 5400
- Manufacturer	Henkel AG & Co. KGaA
- Application rate	0.1 kg/m² (Dry, cured)
- Mixing ratio by weight (Comp. A: Comp. B)	5:1
- Mixing ratio by volume (Comp. A: Comp. B)	3.7:1
- Application thickness	0.17 mm (Dry, cured)
- Specific gravity (g/cm³)	Component A: 1.6 – 1.7 Component B: 1.17 – 1.27
- Colour reference	Beige / Brown
- Trade name flame retardant	Note 1
- Generic type flame retardant	Note 1
- Amount flame retardant	Note 1
Exterior facing 2 - Generic type	Aluminium sheet
- Product reference	Note 1
- Manufacturer	Note 1
- Thickness	1.5 mm
- Mass per unit area/density	4.065 kg/m², 2710 kg/m³
- Colour reference	Silver
- Trade name flame retardant	Note 1
- Generic type flame retardant	Note 1
- Amount flame retardant	Note 1
Exterior facing 1 - Generic type	Polyester powder coating
- Product reference	Interpon D1036 Matt, Interpon D1036 Gloss, Interpon D2525 Gloss, Interpon D2525 Matt
- Manufacturer	AkzoNobel Powder Coatings
- Thickness	0.06 mm
- Mass per unit area/density	0.125 kg/m², 1.2 - 1.9 g/cm³, depending on colour
- Colour reference	Black: KL008, Red: KL002, White: KL009
- Trade name flame retardant	Note 1
- Generic type flame retardant	Note 1
- Amount flame retardant	Note 1
Substrate (if applicable) - Generic type	None
- Product standard	Note 1
- Product name/reference	Note 1
- Manufacturer	Note 1
- Thickness	Note 1
- Density or mass per unit area	Note 1
- Class (EN 13501-1)	Note 1
Orientation aspects	Symmetrical
Sampling Identification Reference	Note 1
Additional information	Note 1

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

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Figure A.1: Test sample as received, black polyester coating



Report Ends

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Figure A.2: Test sample as received, red polyester coating



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Figure A.3: Test sample as received, white polyester coating



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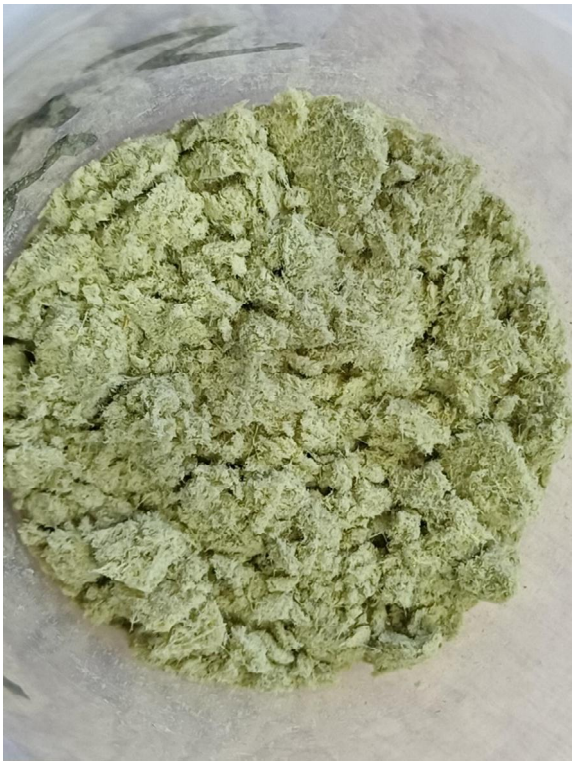
Figure A.4: Test sample as received, adhesive coating



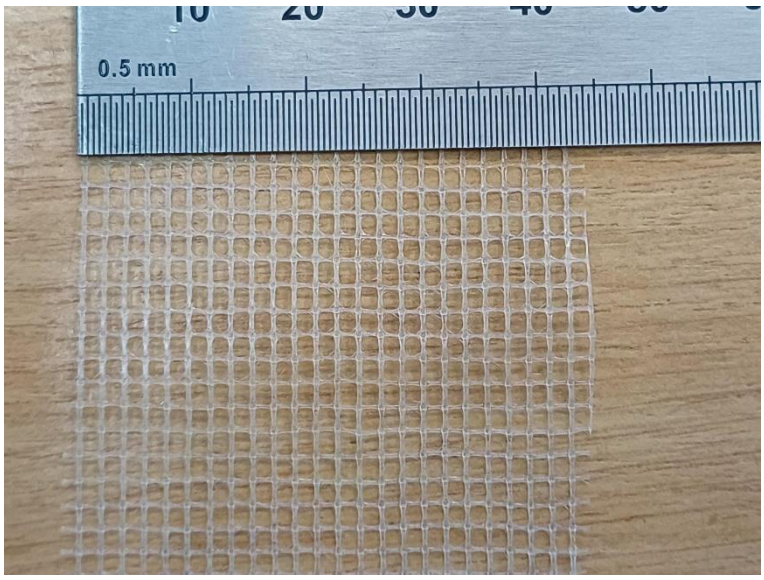
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Figure A.5: Test sample as received, mineral fibre insulation with open filament net facings









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Figure A.6: Test sample as received, BS EN 13823 test specimen (Black)



Figure A.7: Test sample as received, BS EN 13823 test specimen (Red)



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Figure A.8: Test sample as received, BS EN 13823 test specimen (White)



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