

BRE Global Classification Report

Classification report for roofs/roof coverings exposed to external fire (flat) in accordance with EN 13501-5: 2016 on SureSet Resin Bound Paving on 18 mm plywood deck

Prepared for: Sureset UK Ltd

Date: Issue 1: 12 November 2021

Report Number: P120831-1001

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BRE Global

EXTERNAL EXPOSURE TO FIRE CLASSIFICATION (flat) REPORT OF SureSet Resin Bound Paving on 18 mm plywood deck

Classification report No.:	P120831-1001
Issue number:	1
Sponsor:	Sureset UK Ltd, 32 Deverill Road, Trading Estate, Warminster, BA12 7BZ, UK
Product name:	SureSet Resin Bound Paving
Prepared by:	BRE Global Ltd., Bucknalls Lane, Garston, Watford, WD25 9XX, England.
Approved Body Number	0832
Date of issue:	12 November 2021

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1 Introduction

This classification report defines the classification flat assigned to roof/roof covering Sureset UK Ltd in accordance with the procedures given in EN 13501-5: 2016.

2 Sample

2.1 Traceability

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

2.2 Description of the roof/roof covering

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Test Sponsor	Sureset UK Ltd, 32 Deverill Road, Trading Estate, Warminster, BA12 7BZ, UK
Manufacturer of sample	As above
Sample name/reference	SureSet Resin Bound Paving, Barley Butter / SureCell
Place of manufacture	As above
Sample description (as provided by test sponsor/manufacturer)	Polyurethane bound aggregate paving on stone filled geocell drainage layer on plywood deck. A full product definition as supplied by the test sponsor has been included in this report as Appendix A
Description of sample (as received by BRE Global)	<ol style="list-style-type: none"> 1) Bound fine gravel (Particle sizes approx. 2 to 14 mm) approx. 25 mm deep. 2) Black plastic moulded layer including a filling of stones approx. 50-52 mm deep. 3) Metal frame surrounding layer 1 & 2, including screwed on lifting points. 4) Plywood base, 18mm thick. <p>Photographs of the sample are given in Appendix B.</p>
Sample receipt date	15 June 2021 (E13667)
Test face	Aggregate



Test format	The test was carried out in the flat position
Date of test	13 September 2021
Purchase order	27028
Test operator	P Potter

Unless otherwise stated all measurements are nominal.

3 Reports in support of classification

Name of Laboratory	Name of sponsor	Test report ref. no.	Test method
BRE Global	Sureset UK Ltd	P120831-1000	CEN/TS 1187: 2012 Test 4

4 Test results in support of classification

4.1 Test conditions:

Test pitch: Flat
Deck: As product description, Section 2
Supporting structure: As product description, Section 2



4.2 Preliminary test (stage 1)

Parameter	Criteria				Test result	Compliance			
	Class B _{ROOF(t4)}	Class C _{ROOF(t4)}	Class D _{ROOF(t4)}	Class E _{ROOF(t4)}		Class B _{ROOF(t4)}	Class C _{ROOF(t4)}	Class D _{ROOF(t4)}	Class E _{ROOF(t4)}
Burn time	< 5 min	< 5 min	< 5 min	≥5 min	0 sec	Y	-	-	-
Flame spread distance	< 0,38m	< 0,38m	< 0,38m	No limit	0 mm	Y	-	-	-
Penetration	None	None	None	None	None	Y	-	-	-

4.3 Penetration test (stage 2)

Parameter	Criteria				Test results				Compliance			
	Class B _{ROOF(t4)}	Class C _{ROOF(t4)}	Class D _{ROOF(t4)}	Class E _{ROOF(t4)}	Specimen 1	Specimen 2	Specimen 3	Mean*	Class B _{ROOF(t4)}	Class C _{ROOF(t4)}	Class D _{ROOF(t4)}	Class E _{ROOF(t4)}
Penetration time	≥ 60 min	< 60 min ≥ 30 min	<30 min	< 30 min	≥ 60 min	≥ 60 min	≥ 60 min	60 min	Y	-	-	-

* If one or two of the specimens have not failed at one hour, a time of 60 min shall be used in calculating the mean time of penetration



5 Classification and field of application

5.1 Reference of classification

This classification has been carried out in accordance with EN 13501-5: 2016.

5.2 Classification

The roof / roof covering SureSet Resin Bound Paving, as described in Section 2 above and Appendix A, in relation to its external fire performance is classified:

B_{ROOF}(t4)

5.3 Field of application

This classification is valid for the following conditions:

Range of pitches	0° < pitch ≤ 10°
Substrate / deck	18 mm plywood. As tested, no variation allowed
Supporting structure	As tested, no variation allowed
Product configuration	As tested, no variation allowed
Product composition	As tested, no variation allowed
Product application method	As tested, no variation allowed
Product thickness	As tested, no variation allowed
Product colour	As tested, no variation allowed
Joints	Continuous layer, without joints. As tested, no variation allowed

6 Limitations

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

The information in section 2.2 and Appendix A of this report, other than that indicated otherwise, has been supplied by the test sponsor and has not been independently verified by BRE Global. The validity of the results is conditional on the accuracy of that data.



7 Reference

- 1 EN 13501-5: 2016 Fire classification of construction products and building elements – Part 5: Classification using data from external fire exposure to roofs tests. CEN, Avenue Marnix 17, B-1000, Brussels, Belgium. 2016.
- 2 CEN/TS 1187: 2012 Test methods for external fire exposure to roofs. Test 4 – Two stage method incorporating burning brands, wind and supplementary radiant heat. CEN, Avenue Marnix 17, B-1000, Brussels, Belgium. 2012.



Appendix A Product description provided by the test sponsor

PRODUCT DEFINITION

Test sponsor (Company name and address): Sureset UK Ltd 32 Deverill Road Trading Estate, Warminster BA12 7BZ UK	
Product name of roof covering tested	SureSet Resin Bound Paving
Product reference/number	Barley Butter / SureCell
General description of roofing product tested and build up	Polyurethane bound aggregate paving on stone filled geocell drainage layer on plywood deck.
Manufacturer of the roofing product (Company name and address)	SureSet UK Ltd 32 Deverill Road Trading Estate Warminster BA12 7BZ UK
Place of manufacture	As above
Test specimens assembled by (if not by roof product manufacturer)	As above
Thickness (overall depth of roof structure tested)	94 mm
Mass per unit area (overall value for the roof structure tested)	137.4 kg/m ²
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	NA
Please describe the roof build up, layer by layer, starting with the upper roof surface. Please add or remove rows as required.	
Test face (Layer 1) - Name/reference - Manufacturer - Type - Thickness - Mass per unit area - Colour - Application method - Joint details (fixing method, overlap, etc) - Fire retardant (trade name, generic type, amount)	SureSet Barley Butter – Blend No. 2304 SureSet UK Ltd Polyurethane bound aggregate paving 23 - 26 mm 44.2 kg/m ² Light brown Uncured resin-coated aggregate trowelled in place in-situ and curing to a hard surface. NA None



Test sponsor (Company name and address): Sureset UK Ltd 32 Deverill Road Trading Estate, Warminster BA12 7BZ UK	
Product name of roof covering tested	SureSet Resin Bound Paving
Layer 2 - Name/reference - Manufacturer - Type - Thickness - Mass per unit area - Colour - Application method - Joint details (fixing method, overlap, etc) - Fire retardant (trade name, generic type, amount)	SureCell Sureset UK Ltd / Note 1 Stone-filled geocell drainage layer 52 mm 82.9 kg/m ² Natural / Black Loose laid and filled with stone chippings and compacted in-situ NA None
Layer 3 (eg "deck" or "substrate") - Name/reference - Manufacturer - Type - Thickness - Mass per unit area - Colour - Application method - Joint details (fixing method, overlap, etc) - Fire retardant (trade name, generic type, amount)	Far Eastern exterior grade plywood K-Sun Wood Company Ltd EN636 – 2S 18 mm 10.3 kg/m ² Natural Mechanically attached to roof with fixings NA None

Note 1: At the request of the test sponsor this commercially sensitive information which forms part of the definition of the product tested/classified has been withheld from the report and is held on a confidential client file by BRE Global.



Appendix B Photographs of a test specimen



Close up view of sample



Top of sample



Side of sample