

Classification report for roofs/roof coverings exposed to external fire No. 19907B

Owner of the classification report

PRINCIPAL BUILDING PRODUCTS LTD.
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Introduction

This classification report defines the classification assigned to the roof/roof covering «**Sentinel GRP**» in accordance with the procedures given in the standard EN 13501-5:2016 : Fire classification of construction products and building elements – Part 5: Classification using data from external fire exposure to roofs tests: Test 4: Method with two stages incorporating burning brands, wind and supplementary radiant heat

This classification report consists of 5 pages

1. DESCRIPTION OF THE ROOF/ROOF COVERING

This description is based on information given by the sponsor.

	Nominal value	Measured value
SUPPORTING DECK		
Material	OSB	
Thickness (mm)	19	
Density (kg/m ³)	10	
ROOF COVERING		
1.1 <u>Liquid applied base layer</u>		
Material	Unsaturated polyester resin; styrene EC. 202-851-5	
Trade name	Sentinel Roofing Resin	
Manufacturer / Supplier	Principal Building Products Ltd	
Thickness (µm)	500	(*)
Applied Surface weight (g/m ²)	1500	(*)
Flame retardants	None	(*)
Fixing method	Liquid resin combined with catalyst is cold applied by roller which is overlaid and combined with chopped strand matting. The resin and matting then solidifies	
1.1 <u>Reinforcement</u>		
Material	Glass fibre	
Trade name	Sentinel Chopped Strand Matting	
Manufacturer	Principal Building Products Ltd	
Supplier	Principal Building Products Ltd	
Thickness (mm)	500	(*)
Surface weight (g/m ²)	450	(*)
Flame retardants	None	(*)
Fixing method	See above for Resin	
1.2 <u>Liquid applied top layer</u>		
Material	Unsaturated polyester resin; styrene EC. 202-851-5, roller applied on the base layer and CSM reinforcement.	
Trade name	Sentinel Roofing Topcoat	
Manufacturer / Supplier	Principal Building Products Ltd	
Colour	Dark Grey	
Thickness (µm)	250	(*)
Applied Surface weight (g/m ²)	500	(*)
Flame retardants	None	(*)
Fixing method	Liquid Topcoat combined with catalyst is cold applied by roller The Topcoat solidifies to form an inseparable waterproof layer with the Resin and Chopped Strand Matting	

(*) Not verifiable due to sample build-up

2. TEST REPORTS AND TEST RESULTS IN SUPPORT OF THIS CLASSIFICATION

a) Test reports

Name of the laboratory	Name of the sponsor	Test report ref. no.	Test method
WFRGENT NV	Principal Building Products Ltd.	19907A	CEN/TS 1187:2012: Test 4

b) Test results

Test conditions:

- Test pitch: 0°
- Deck: OSB-board (19 mm, 10 kg/m³)

PRELIMINARY TEST (STAGE 1)

Parameter	Criteria				Test ^(a) results	Compliance			
	Class B _{ROOF} (t4)	Class C _{ROOF} (t4)	Class D _{ROOF} (t4)	Class E _{ROOF} (t4)	Spec. 1	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	00:26	Yes	Yes	Yes	Yes
Flame spread distance	< 0,38 m	< 0,38 m	< 0,38 m	No limit	0,08	Yes	Yes	Yes	Yes
Penetration	None	None	None	None	None	Yes	Yes	Yes	Yes

(a) Not for extended application.

PENETRATION TEST (STAGE 2)

Parameter	Criteria			
	Class B _{ROOF} (t4)	Class C _{ROOF} (t4)	Class D _{ROOF} (t4)	Class E _{ROOF} (t4)
Penetration	≥ 60 min	< 60 min ≥ 30 min	< 30 min	< 30 min
Parameter	Test ^(a) results			
	Spec. 1	Spec. 2	Spec. 3	Mean ^a
Penetration	None	None	None	None
Parameter	Compliance			
	Class B _{ROOF} (t4)	Class C _{ROOF} (t4)	Class D _{ROOF} (t4)	Class E _{ROOF} (t4)
Penetration	Yes	Yes	Yes	Yes

(a) 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.

3. CLASSIFICATION AND FIELD OF APPLICATION

a) Reference

This classification has been carried out in accordance with clause 9 test 4 of EN 13501-5:2016 and ETAG005-11-08-2000.

b) Classification

The roof / roof covering «**Sentinel GRP**» in relation to its external fire performance is classified:

BR00F (t4)

c) Direct field of application

The classification is valid for the system as described in §1 for the following conditions:

- Range of pitches: $\leq 10^\circ$
- Substrate: OSB (19 mm or more, 10 kg/m³)

4. LIMITATIONS

At the time the standard EN 13501-5:2016 was published, no decision was made concerning the duration of validity of a classification document.

Provisions of Regulation (EU) 305/2011, commonly known as the Construction Products Regulation (CPR), prevail over any conflicting provisions in the harmonized standards and technical specifications.

5. WARNING

This classification report does not represent type approval nor certification of the product.

6. CONCERNING DECLARATION OF PERFORMANCE (DoP) ACCORDING TO THE CONSTRUCTION PRODUCT REGULATION (CPR)

Annex ZA of the harmonized standard

- ETAG005-11-08-2000: Liquid applied roof waterproofing kits declares that a System 3 Attestation of Conformity (AoC) under the Construction Products Directive (CPD: 89/106/EEC) is required for all external fire performance declarations better than class F_{roof} (t1, t2, t3, t4). Under the Construction Products Regulation (CPR: EU 305/2011) this corresponds with a System 3 of Assessment and Verification of Constancy of Performance (AVCP) as basis for a Declaration of Performance (DoP).

The classification assigned to the product in this report is appropriate to such a Declaration of Performance of the essential characteristics of the construction product by the manufacturer within the context of a System 3 Assessment and Verification of Constancy of Performance. Under the Construction Products Regulation a Declaration of Performance (DoP) is a requirement for affixing the CE marking.

PREPARED BY

APPROVED BY

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