

Classification report for roofs/roof coverings exposed to external fire No. 23395C

Owner of the classification report

RESTEC ROOFING SYSTEMS
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Introduction

This classification report defines the classification assigned to the roof/roof covering «**GRP ROOF - PET**» 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 6 pages

1. DESCRIPTION OF THE ROOF/ROOF COVERING

This description is based on information given by the sponsor.

	Nominal values (1)	Measured values (2)
SUPPORTING DECK		
Material	OSB/3	
Thickness (mm)	18	(3)
Density (kg/m ³)	644	(3)
VAPOUR BARRIER		
Material	Polyethylene vapour control layer	
Trade name	(4)	
Manufacturer / Supplier	(4)	
Total thickness (mm)	0,3	(3)
Total surface weight (g/m ²)	260	(3)
Flame retardants	No	(3)
Fixing method	Mechanically fixed with EJOT screws	
Joints	None	
Reaction to fire according to EN 13501-1	NPD	
INSULATING LAYER		
Material	Polyisocyanurate (PIR) insulation with a foil facing and backing.	
Trade name	(4)	
Backing (material + g/m ²)	Foil, surface weight not communicated by the sponsor	
Facing (material + g/m ²)	Foil, surface weight not communicated by the sponsor	
Manufacturer / Supplier	(4)	
Thickness (mm)	150	(3)
Density, of the core material (kg/m ³)	30	(3)
Flame retardants	No	(3)
Fixing method	Mechanically fixed with EJOT screws	
Joints	Central and none	
	Type	Butted
	Overlap (mm)	None
Reaction to fire according to EN 13501-1	NPD	
INTERMEDIATE DECK		
Material	OSB/3	
Thickness (mm)	18	(3)
Density (kg/m ³)	644	(3)

(1) Based on the information given by the sponsor

(2) Values verified by the laboratory

(3) Unverifiable by the laboratory, since the sponsor did not provide the laboratory with samples for measurement.

(4) Known by the laboratory

	Nominal values (1)	Measured values (2)
ROOF COVERING		
1.1 <u>Base layer</u>		
Material	Liquid applied polyester and polyethylene terephthalate base layer	
Trade name	GRP Roof PET	
Manufacturer / Supplier	Restec Limited	
Thickness, wet (mm)	1,5	(3)
Applied amount, wet (g/m ²)	1150	(3)
Flame retardants	Yes	(3)
Application method	Roller applied	
Solid content (w%)	100	
Curing time (hh:min)	00:16	
1.2 <u>Reinforcement</u>		
Material	Glass Mat reinforcement	
Trade name	Reinforcement mat	
Surface weight (g/m ²)	450	
Application method	Embedded into wet base layer	
1.3 <u>Top layer</u>		
Material	Liquid applied polyester top layer.	
Trade name	GRP Roof Top Coat	
Manufacturer / Supplier	Restec Limited	
Thickness, wet (mm)	0,675	(3)
Applied amount, wet (g/m ²)	675	(3)
Flame retardants	Yes	(3)
Application method	Roller applied	
Solid content (w%)	100	
Curing time (hh:min)	00:15	

(1) Based on the information given by the sponsor

(2) Values verified by the laboratory

(3) Unverifiable by the laboratory, since the sponsor did not provide the laboratory with samples for measurement.

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 Ghent - Belgium	RESTEC ROOFING SYSTEMS	23395B	CEN/TS 1187:2012: Test 4

b) Test results

Test conditions: 23395B

Specimen No.	1	2	3	4
Date of test	28/02/2024	28/02/2024	09/03/2024	09/03/2024
Roof pitch	0°	0°	0°	0°
Room temperature at start of test (°C):	19	19	18	18

PRELIMINARY TEST (STAGE 1)

Parameter	Criteria				Test ^(a) results Spec. 1	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	00:00	Yes	Yes	Yes	No
Flame spread distance	< 0,38 m	< 0,38 m	< 0,38 m	No limit	0,07	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	No	No	No

(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 the related harmonized product standard is EAD 030350-00-0402:2018.

b) Classification

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

B_{ROOF} (t4)

c) Direct field of application

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

- Range of pitches: ≤ 10°
- Deck: OSB/3 (18 mm ; 644 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)

According to EAD 030350-00-0402:2018 (§3.1) the applicable legal acts for liquid applied roof waterproofing kits are Decision 98/599/EC and amended by Commission Decision 2001/596/EC. The system of Assessment and Verification of Constancy of Performance (AVCP) for a Declaration of Performance (DoP) under the Construction Products Regulation (CPR: EU 305/2011) is System 3.

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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