REPORT

Issued by an Accredited Testing Laboratory

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Reference
O100741-1314877

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Estland

External Fire Exposure to roof according to CEN/TS 1187, test method 2 with burning brands and wind

(1 appendix)

Introduction

RISE has by request of Solarstone OÜ performed a fire test according to CEN/TS 1187 test 2. The test is for informatory purpose.

Product

According to the client:

Solar Full Roof (SFR) consisting of aluminium frame and hardened glass. Front - 2.0 mm solar glass with ARC and Back - 2.0 mm Solar glass Black Grid. The product has a nominal thickness of 35 mm and a nominal area weight 13.4 kg/m^2.

Client

Solarstone OÜ, Tallinn, Estonia.

Sampling

The sample was delivered by the client. It is not known to RISE, Fire and Safety if the product received is representative of the mean production characteristics.

The sample was received April 9, 2025 at RISE, Fire and Safety.

Test results

The test results of "Solar Full Roof (SFR)" when applied onto a combustible backing (expanded polystyrene (EPS), 20 kg/m^3), are given in appendix 1.

The test results relate only to the behaviour of the test specimens of a product under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the product in use.

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Criteria

According to EN 13501-5:2016 “Fire classification of construction products and building elements – Part 5: Classification using data from external fire exposure to roofs tests”, a roof covering can be deemed to meet the criteria for class B_{ROOF} (t2) if it fulfils the following criteria when tested according to CEN/TS 1187, test 2 at 2 and 4 m/s:

- The damage length, in the roof covering as well as in the backing, does not exceed 550 mm in average of three tests.
- The damage length, in the roof covering as well as in the backing, does not exceed 800 mm in any test.

Deviation from standard

Only two tests were carried out, instead of the six stipulated in the standard.

Note

This test does not comply with the standard as far as number of tests is concerned. It can therefore not be used as the sole basis for a classification or an approval.

RISE Research Institutes of Sweden AB
Fire and safety - Reaction to Fire Material Lab

Performed by

Henrik Fredriksson

Examined by

Per Thureson

Appendix

1. Test results – CEN/TS 1187:2012 test 2

Appendix 1

Test results – CEN/TS 1187:2012, test 2

Product

According to the client:

Solar Full Roof (SFR) consisting of aluminium frame and hardened glass. Front - 2.0 mm solar glass with ARC and Back - 2.0 mm Solar glass Black Grid. The product has a nominal thickness of 35 mm and a nominal area 13.4 kg/m^2.

Application

The specimen was laid loosley onto a combustible board (expanded polystyrene (EPS)) having a density of 20 kg/m^3 approximately.

Test results

Test no	1	2	3	Average value	4	5	6	Average value
Air velocity, m/s	2	2	2		4	4	4	
The roof covering was ignited, min:s	-	-	-		-	-	-	
The flames died out, min:s	02:21	-	-	-	02:17	-	-	-
The glow died out, min:s	08:32	-	-	-	05:41	-	-	-
Fire and glow were extinguished, min:s	-	-	-	-	-	-	-	-
Damage on the surface, mm	50	-	-	-	50	-	-	-
Damage in the underlay, mm	0	-	-	-	0	-	-	-

Note

The surface of the material does not ignite, the damage consists of heat deformation from the ignition source.

Measured data

Thickness 35.0 approximately.
Area weight 15.0 kg/m^2 approximately.

Conditioning

Temperature (23 ± 2) °C.
Relative humidity (50 ± 5) %.

Date of test

April 28, 2025.

Verification

Transaction 09222115557545848091

Document

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