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Classification report for roof coverings exposed to external fire according to EN 13501-5

1 Introduction

This classification report defines the classification assigned to roof covering "Rhenofol CV" in accordance with the procedures given in EN 13501-5:2005 + A1:2009.

2 Description of the roof covering

2.1 General

The product "Rhenofol CV" is defined as a roof covering.

2.2 Product description

The product, "Rhenofol CV", is fully described below.

According to the client:

Roof covering called "Rhenofol CV" consisting of PVC. The product has a nominal area weight of 1.47 kg/m² and 2.48 kg/m² and a nominal thickness of 1.2 mm and 2.0 mm. Colour is grey.

3 Test reports

3.1 Test reports

This classification is based on the test report listed below:

Name of laboratory	Name of sponsor	Test report ref no	Accredited test method
SP	FDT Flachdach Technologie GmbH & Co	5P09194	CEN/TS 1187 test 2

SP Technical Research Institute of Sweden

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3.2 Test results

Test conditions: according to CEN/TS 1187:2012, test 2.

Test pitch: 30°.

Substrate:

- Board of mineral wool, density (150 ± 20) kg/m³, thickness (50 ± 10) mm.
- Board of expanded polystyrene (EPS), density (20 ± 5) kg/m³, thickness (50 ± 10) mm, with intermediate glass fleece with nominal area weight 120 g/m².
- Board of wood particle, density (680 ± 50) kg/m³, thickness (19 ± 2) mm, with intermediate glass fleece with nominal area weight 120 g/m².
- Board of foamed mixture PIR/PUR, density (35 – 45) kg/m³, thickness (100 ± 2) mm, with intermediate glass fleece with nominal area weight 120 g/m².

The product has been tested on several different substrates. The test results listed below show the worst case as found in the test programme performed and reported according to the table above.

Parameter	Criteria		Test Resultat					Compliance
	Mean [m]	Max [m]	Spe. 1 [m]	Spe. 2 [m]	Spe. 3 [m]	Mean [m]	Max [m]	
Damaged length at 2 m/s – roof covering	≤0.550	≤0.800	0.438	0.457	0.469	0.455	0.469	Yes
Damaged length at 2 m/s - substrate	≤0.550	≤0.800	0.470	0.470	0.470	0.470	0.470	Yes
Damaged length at 4 m/s – roof covering	≤0.550	≤0.800	0.480	0.495	0.472	0.482	0.495	Yes
Damaged length at 4 m/s - substrate	≤0.550	≤0.800	0.465	0.510	0.489	0.488	0.510	Yes

4. Classification and field of application

4.1 Reference

This classification has been carried out in accordance with EN 13501-5:2005 + A1:2009.

4.2 Classification

The roof covering "Rhenofol CV" in relation to its external fire performance is classified:

B_{ROOF}(t2)

4.3 Field of application:

This classification is valid for the following conditions:

- Nominal thickness: 1.2 – 2.0 mm.
- Nominal area weight 1.47 – 2.48 kg/m².

Range of substrates:

- Non-combustible substrates, having a density ≥ 112.5 kg/m³.
- Combustible and non-combustible substrates, having a density ≥ 15 kg/m³, with intermediate glass fleece with nominal area weight 120 g/m².
- Combustible board of foamed mixture PIR/PUR, density (35 – 45) kg/m³, thickness (100 ± 2) mm, with intermediate glass fleece with nominal area weight 120 g/m².

Range of pitches:

- All pitches.

5 Limitations

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

SP Technical Research Institute of Sweden Fire Research - Fire Dynamics

Performed by

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