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## Classification report for roof coverings exposed to external fire

### 1. Introduction

This classification report defines the classification assigned to the product "Xeroflor Moss-Sedum takvegetation" in accordance with the procedure given in EN 13501-5:2005.

### 2. Description of the roof covering

The product, "Xeroflor Moss-Sedum takvegetation", is fully described below.

According to the client:

Roof covering called "Xeroflor Moss-Sedum takvegetation", consisting of the layers described below.

Top layer called "Xeroflor Moss-Sedummatta", (Vegetation mat) consisting of a non-woven fabric of PP, area weight 100 g/m<sup>2</sup> bound to a three-dimensional reinforcement net of PA, area weight 320 g/m<sup>2</sup>. The top layer reinforcement is filled with mineral substrate of sand, clay mineral, lava-cross and compost (organic content < 5 %). In the mineral substrate there are growing 5 different sedum plants and 4 different mosses. The top layer has a nominal thickness of 30 mm and a nominal area weight of 35 kg/m<sup>2</sup> (dry).

Bottom layer for sloping roofs called "VT-Filt", (Waterstorage) consisting of needle-felt from recycled textile fibres (60 % synthetic, 40 % organic). It has a nominal thickness of 10 mm and a nominal area weight of 1200 g/m<sup>2</sup>.

Bottom layer for plane roofs called "VegTech ND 5+1", (Draining layer + waterstorage) consisting of a non-woven fabric on the top (black) of PP, area weight 125 g/m<sup>2</sup> bound to a plastic draining layer with cups of HIPS and on the back a separation fabric of PP, area weight 125 g/m<sup>2</sup>. The total nominal area weight for this layer is 1280 g/m<sup>2</sup>.

### 3. Test reports and test results in support of this classification

#### 3.1 Test reports

Name of laboratory	Name of sponsor	Test report ref no	Test method
SP	Veg tech AB	P800074	ENV 1187, test 2

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**3.2 Test results, test method 2**

The test results listed below show the worst case as found in the test programme performed and reported according to the table above. The tests have been carried out on products covering both with and without different bottom layer. One bottom layer for sloping roofs and one for plane roofs.

Test condition according to ENV 1187:2002, test 2.

Test pitch 30°.

Substrate of combustible but not treated with fire retardant expanded polystyrene (EPS) having a density of  $20 \pm 5 \text{ kg/m}^3$  and thickness  $50 \pm 10 \text{ mm}$ .

Parameter	Criteria		Test Results					Compliance
	Mean	Max	Test 1	Test 2	Test 3	Mean	Max	
Damaged length at 2 m/s – roof covering	$\leq 0.550 \text{ m}$	$\leq 0.800 \text{ m}$	0	0	0	0	0	Yes
Damaged length at 2 m/s - substrate	$\leq 0.550 \text{ m}$	$\leq 0.800 \text{ m}$	-	-	-	-	-	Yes
Damaged length at 4 m/s – roof covering	$\leq 0.550 \text{ m}$	$\leq 0.800 \text{ m}$	0	0	0	0	0	Yes
Damaged length at 4 m/s - substrate	$\leq 0.550 \text{ m}$	$\leq 0.800 \text{ m}$	-	-	-	-	-	Yes

**4. Classification and field of application**

**4.1 Reference**

This classification has been carried out in accordance with clause 6.4.3, 7, 8.2 and 9 of EN 13501-5:2005.

**4.2 Classification**

The roof covering “Xeroflor Moss-Sedum takvegetation” 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:

Substrates

- Combustible and non-combustible, having a density  $\geq 20 \text{ kg/m}^3$ .

Pitches

- All pitches.

This classification is also valid for the following product parameters:

Top layer called "Xeroflor Moss-Sedummatta":

Nominal thickness: 30 mm.

Nominal area weight:  $35 \text{ kg/m}^2$ .

Bottom layer for sloping roofs called "VT-Filt":

Nominal thickness: 10 mm.

Nominal area weight:  $1200 \text{ g/m}^2$ .

Bottom layer for plane roofs called "VegTech ND 5+1":

Nominal thickness: 25 mm.

Nominal area weight:  $1280 \text{ g/m}^2$ .

The sample was delivered by the client. SP Fire Technology was not involved in the sampling procedure.

#### 5. Limitations

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

**SP Sveriges Tekniska Forskningsinstitut**  
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