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## External Fire Exposure to roof according to ENV 1187, test method 2 with burning brands and wind (1 appendix)

### Product

Roof covering system called "Elastoplus Coating" consisting of the following:

- Top layer called "Elastoplus Coating" having a light grey colour. Applied amount approximately 1,2 kg/m<sup>2</sup> giving a nominal thickness of 2.5 mm.
- Bitumen roofing called YAM 2000.
- Wooden particle board.

### Manufacturer

Not known to SP.

### Purpose of test

Orientation test.

### Sampling

The sample was delivered by the client. It is not known to SP Fire Technology if the product received is representative of the mean production characteristics.

The samples were received October 14, 2009 at SP Fire Technology.

### Test results

Reduced fire test series:

The test results of "Elastoplus Coating" in combination with an old roofing felt, in this case YAM 2000, applied onto a combustible backing (board of 10 mm thick particle board), are given in appendix 1.

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The test results relate 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.

### Criteria

According to EN 13501-5:2005 “Fire classification of construction products and building elements – Part 5: Classifications using data from external fire exposure test 2, a roof covering can be deemed to meet the criteria for class B<sub>ROOF</sub> (t2) if it fulfils the following criteria when tested according to ENV 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.

### SP Technical Research Institute of Sweden Fire Technology - Fire Dynamics

A handwritten signature in blue ink, appearing to read 'Per Thureson'.

Per Thureson  
Technical Manager

A handwritten signature in blue ink, appearing to read 'Magnus Stureson'.

Magnus Stureson  
Technical Officer

### Appendix

#### 1 Test results

Appendix 1

**Test results – ENV 1187:2002, Test 2**

**Product**

Roof covering system called “Elastoplus Coating” consisting of the following:

- Top layer called “Elastoplus Coating” having a light grey colour. Applied amount approximately 1,2 kg/m<sup>2</sup> giving a nominal thickness of 2.5 mm.
- Bitumen roofing called YAM 2000.
- Wooden particle board.

**Application**

The specimens were prepared by the client.

**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	00:28	-	-	-	00:28	-	-	-
The flames died out, min:s	05:39	-	-	-	03:58	-	-	-
The glow died out, min:s	08:41	-	-	-	05:27	-	-	-
Fire and glow were extinguished, min:s	-	-	-	-	-	-	-	-
Damage on the surface, mm	465	-	-	-	390	-	-	-
Damage in the underlay, mm	42	-	-	-	0	-	-	-

**Measured data**

(particle board + roof covering system)

Thickness 16 mm.

**Conditioning**

Temperature 23 ± 2 °C.

Relative humidity (50 ± 5) %.

**Date of test**

October 30, 2009.