

## Test Report No. 16075D

### Sponsor

Derivados Asfálticos Normalizados sa  
Poligono Industrial Sector 9  
19290 Fontanar (Guadalajara)  
Spain

### Trade name of the roof covering

DANOPOL HS RF

### Manufacturer of the roof covering

Derivados Asfálticos Normalizados sa  
Poligono Industrial Sector 9  
19290 Fontanar (Guadalajara)  
Spain

### Supplier of the roof covering

Derivados Asfálticos Normalizados sa  
Poligono Industrial Sector 9  
19290 Fontanar (Guadalajara)  
Spain


### Nature of the tests

Test methods for external fire exposure to roofs: Test method 2: Method with burning brands and wind. The test has been carried out according to CEN/TS 1187:2012 and is assessed to fully comply with ENV 1187/A1:2005.

Ghent, 09 SEP. 2013



ir. K. Catry  
Project leader



dr. ir. B. SETTE  
General Manager

This report consists of 5 pages including 1 annex

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**1. DATA CONCERNING THE TEST SPECIMENS**

Type of specimen:

Covering and sealing systems including any insulating layers or vapour barriers.

The firm Derivados Asfálticos Normalizados sa, Poligono Industrial Sector 9, 19290 Fontanar (Guadalajara), Spain, has provided the laboratory, on 22-05-2013 with 6 roof specimens. The roof specimens were prepared conform to the prescriptions of the above-mentioned standard. The laboratory did not supervise the specimen fabrication.

Sampling by : Mr. Jose Antonio Manarbeitia for Derivados Asfálticos Normalizados sa  
 Sampling date : 20-05-2013  
 Sample ID : DANOPOL HS RF 1.2: TORNO1

**2. CONDITONING**

Before testing, the samples have been conditioned according to the specifications of the standards mentioned above.

Start conditioning : 22-05-2013  
 End conditioning : 27-05-2013

**3. DESCRIPTION OF THE TEST ROOF DECK**

	Nominal value	Measured value
<b>SUBSTRATE</b>		
Standard substrate	Yes	
Material	Mineral wool according to §5.4.2. of the standard	
Thickness (mm)	50	50
Density (kg/m <sup>3</sup> )	150	140
Flame retardants	No	(1)
<b>ROOF COVERING</b>		
Material	PVC waterproofing membrane, with a PES scrim reinforcement	
Trade name	DANOPOL HS RF 1.2	
Manufacturer / Supplier	Derivados Asfálticos Normalizados sa	
Armature (nature and g/m <sup>2</sup> )	Polyester scrim, 93 g/m <sup>2</sup>	
Thickness (mm)	1,2	1,2
Surface weight (g/m <sup>2</sup> )	1600	1604
Flame retardants	Yes	(1)
Fixing method	Loose laid	Loose laid

(1) Not verifiable

#### 4. TEST RESULTS

Date: 27-05-2013.

Ambiant temperature: 15,4°C

Roofpitch: 30°

Testroof		1	2	3	4	5	6
Air velocity below (m/s)		2,06	2,06	2,06	4,02	4,02	4,02
Air velocity above (m/s)		6,05	6,05	6,05	6,05	6,05	6,05
<b>Observations during the test</b>							
Time of ignition	(min:s)	0:27	0:30	0:30	0:15	0:21	0:20
Time when flames die out	(min:s)	4:29	4:25	4:08	1:56	2:29	2:20
Time when glow dies out	(min:s)	8:41	9:05	9:17	6:31	7:16	6:53
<b>Observations during and after the test</b>							
Melting	(yes/no)	Yes	Yes	Yes	Yes	Yes	Yes
Foaming	(yes/no)	Yes	Yes	Yes	Yes	Yes	Yes
Charring	(yes/no)	Yes	Yes	Yes	Yes	Yes	Yes
Expansion	(yes/no)	No	No	No	No	No	No
Shrinkage	(yes/no)	No	No	No	No	No	No
Delamination	(yes/no)	No	No	No	No	No	No
<b>Observations after the test</b>							
Damaged length roof covering (mm)		370	390	380	420	400	420
Damaged length substrate (mm)		160	140	190	160	160	200
Damaged area roof covering (mm <sup>2</sup> )		29700	32400	37400	3720	33000	39600
Damaged area substrate (mm <sup>2</sup> )		16000	18000	18700	19800	19800	24000
Maximum depth of damage (mm)		0	0	0	0	0	0

Resultats			
		Mean value	Max.
2 m/s	Damaged length roof covering (mm)	380	390
	Damaged length substrate (mm)	163	190
4 m/s	Damaged length roof covering (mm)	413	420
	Damaged length substrate (mm)	173	200

## 5. DIRECT FIELD OF APPLICATION OF TEST RESULTS

### 5.1. Roof Pitch

The roof as described has been tested with a roof pitch of 30°.  
The test results apply for all pitches, as defined in §5.10.5 of the standard.

### 5.2. Nature of the deck

The roof as described has been tested with the following supporting deck: Mineral wool density of  $150 \pm 20 \text{ kg/m}^3$  and thickness of  $50 \pm 10 \text{ mm}$ . The test results apply, as defined in § 5.10.1 and 5.10.3 of the standard, for non - combustible substrates having a density greater than or equal to  $97,5 \text{ kg/m}^3$ .

**Photo of the test specimen after the test**

