

Forbo Flooring B.V.
De heer Koert Brocke
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NEDERLAND

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Date
30/01/12

TEST REPORT 11-1093

Samples received :

Marmoleum Decibel 3.5mm Batch nr. 87440, adhesive Eurocol 640, substrate Chipboard
Received on 9/12/2011

Aim of the test :

Determination of fire behaviour

Test conditions :

Standard: **EN ISO 9239-1 (2002)***

Method: Before the test the samples are not cleaned with a spray-extraction machine.
A floorcovering has been glued on wood by the customer. During the test, the specimen is irradiated by a gas radiator at an angle of 30°. A small flame is used to ignite the specimen. The specimen is ignited during 10 minutes. In case of inflammable specimens, the test lasts until the flame is extinguished, but 30 minutes at the most. The criterion is the burned length, from which the critical radiant flux is deduced using a calibration curve.
The test EN 11925-2 has not been performed because the carpet fulfils the requirements of EN 14041 page 8 section 4.1.4 table 2. The carpet has a total mass of 3100 g/m² and a surface pile thickness of 3.5 mm as obtained by the customer.

Number of tests: 4

Measurement uncertainty: The relative reproducibility for 3 repetitions is 15.6% for the flux, 84.5% for the smoke development.

Conditioning samples: 23 ± 2 °C and 50 ± 5 % R.H.

The test results only apply to materials that correspond to the tested sample. Forgery will be legally prosecuted, just like partial reproduction without prior written permission. Tests that are marked *are accredited, those marked ° are not accredited. Advices and interpretations are not covered by the accreditation.

The department of Textiles is Notified laboratory n°1611 for the European Products directive 89/106/EC.

The tests were performed in week 50/2011

OBTAINED RESULTS

a) Critical Flux :

| Sample | Burned length (mm) | | |
|--------------------------------|--------------------|--------------|--------------|
| | after 10 min | after 20 min | after 30 min |
| Width | 355 | 355 | 355 |
| Length | 400 | 410 | 410 |
| Length | 410 | 450 | 450 |
| Length | 395 | 395 | 395 |
| average (of length) | 402 | 418 | 418 |

| Sample | Burned length maximum (mm) | Extinction (s) | Critical Flux (kW/m ²) |
|--------------------------------|----------------------------|----------------|------------------------------------|
| Width | 355 | 1389 | 6.2 |
| Length | 410 | 1245 | 5.2 |
| Length | 450 | 1266 | 4.5 |
| Length | 395 | 1254 | 5.5 |
| average (of length) | 418 | - | 5.1 |

b) Smoke development:

| Sample | Smoke development (%min) | | | Smoke development (%min) |
|--------------------------------|--------------------------|--------------|--------------|--------------------------|
| | after 10 min | after 20 min | after 30 min | Maximum |
| Width | 258 | 327 | 338 | 338 |
| Length | 253 | 318 | 321 | 321 |
| Length | 256 | 339 | 344 | 344 |
| Length | 266 | 345 | 350 | 350 |
| average (of length) | 258 | 334 | 338 | 338 |

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Prof. Dr. Paul KIEKENS, dr. h. c.
Head of Department

ENCLOSURE TO REPORT 11-1093

Classification according to EN 13501 –1 (2002)°

| Classification | EN ISO 11925-2 (ignition time = 15 s) | EN ISO 9239-1 (test period = 30 min) | CLASS |
|-----------------|--|---|-------|
| B _{fl} | Fs ≤ 150 mm in 20 s | Critical flux ≥ 8.0 kW/m ² | |
| C _{fl} | Fs ≤ 150 mm in 20 s | Critical flux ≥ 4.5 kW/m ² | X |
| D _{fl} | Fs ≤ 150 mm in 20 s | Critical flux ≥ 3.0 kW/m ² | |
| E _{fl} | Fs ≤ 150 mm in 20 s | No demand | |
| F _{fl} | No demand | No demand | |

Additional classification smoke development according to EN 13501-1 (2002)°

| | | CLASS |
|------------------------------|----|-------|
| Smoke development ≤ 750%.min | s1 | X |
| Smoke development > 750%.min | s2 | |