Report 72624
Test Report

Applicant

KLEEN-TEX INDUSTRIES GMBH
Münchner Straße 21
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ÖSTERREICH

Reference

Mr Paul Roller

Application

Testing of the burning behaviour according EN ISO 9239-1 and EN ISO 11925-2.

Test Material

"Mat with cotton pile and NBR backing"

Material used in testing was anonymized for laboratory purposes. A detailed sample list is contained in the report.

Issuing and Signatures

Number of pages contained: 10

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Authorised for Institute
Ing. Franz Lenz

Contents

1 Order

1.1 Chronology

Date	*Received*	*Order*
2013-11-29	2013-12-03	Testing of the burning behaviour according EN ISO 9239-1 and EN ISO 11925-2.

1.2 Samples

No.	*Received*	*Sample Identification*
1	2013-12-02 (1)	"Mat with cotton pile and NBR backing"

(1) Samples provided by the customer. (2) Sample drawn by ÖTI.

2 Findings / Tests performed

2.1 Description of building product - Floor covering

Test results

Tested sample: 1

Manufacturer:	Kleen-Tex (according to the specification by the applicant)
Manufacturing procedure:	tufted
Material of pile/wear layer:	100% Cotton (according to the specification by the applicant)
Primary backing:	fleece
Structure of use surface:	cut pile
Colouring:	tonal effect (brown/blue)
Secondary backing:	NBR (Nitril Butadiene Rubber) (laut Angabe des Antragstellers)
Dimensions:	115 x 200 cm (according to the specification by the applicant)

	specification by ÖTI	specification by the applicant
Mass	2584 g/m²	2720 g/m²
Weight of backing	--	1780 g/m²
Weight of substrate	--	120 g/m²
Thickness	5.2 mm	--
Thickness before first wash	--	4 mm
Thickness after washing	--	10 mm
Total pile mass	--	820 g/m²
Pile mass above the substrate	655 g/m²	--
Pile thickness	2.9 mm	--
Pile height above backing	--	9 mm
Thickness of backing	--	1, 5 mm basic rubber with a 1 mm border reinforcement

2.2 Determination of mass per unit and pile mass per unit area

Test conditions

According ISO 8543 accr.)
Test atmosphere: 20° C / 65 % rel. humidity
Type of shearing apparature: Sharp pointed knife
Number of samples: 4

Test results

Tested sample: 1

	mass per unit area	pile mass per unit area
Mean value	**2584 g/m²**	**655 g/m²**
Coefficient of variation	0.5 %	3.5 %
Confidence interval (P = 95 %) absolute width	± 19 g/m²	± 37 g/m²

Note:
The pile mass per unit area of pile carpets represents the mass over the carpet-ground which can be sheared with the sharp pointed knife. If other procedures are consulted for the shearing of the pile material, then is to be counted on deviating results. The pile mass per unit area should not be confounded with the pile weight.

2.3 Determination of thickness and thickness of wear layer

Test conditions

Testing according
Determination of thickness according to ISO 1765 accr.)
Determination of thickness of wear layer according to ISO 1766 accr.)
Test atmosphere: 20° C / 65 % rel. humidity
Shearing methode: Sharp pointed knife
Number of samples: 4

Test results

Tested sample: 4

	total thickness	thickness of wear layer
Mean value	**5.2 mm**	**2.9 mm**
Coeffizient of variation	0.5 %	5.2 %
Confidence interval (P = 95 %) absolute width	± 0.1 mm	± 0.3 mm

2.4 Calculation of surface pile density and pile fibre volume ratio

Test conditions

The calculation was made according ISO 8543 accr.) with integration of the following test results:

Pile material	cotton
Density of pile material	1.54 g/cm³
Mass of pile per unit area	655 g/m²
Thickness of above the substrate pile	2.9 mm

Test results

Tested sample: 1

Surface pile density	0.226 g/cm³
Relative surface pile density	14.7 %

2.5 Determination of number of tufts or loops

Test conditions

According to ISO 1763 accr.)

Test results

Tested sample: 1

Number of tufts or loops / 10 cm	in length direction:	28.1
	in cross direction:	32.3
Number of tufts or loops per dm²:		908
Number of tufts or loops per m²:		90800

2.6 Determination of the burning behaviour of floor coverings using a radiant heat source

Test conditions

According to: EN ISO 9239-1 accr.)
Conditioning: according EN 13238 (4.3)
Substrate: Fibre cement boards according EN 13238 (5.1.2)
Arrangement of specimens: loose laid on substrate

Statement
The test results relate to the behaviour of the test specimens of the products under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the products in use.

Test results

Tested sample: 1

Specimen (direction)	Flame spread [cm] after				Self extinguishing after [min : sec]
	10 min	20 min	30 min	Self extinguishing	
1 (length)	49	--	--	49	16 : 30
2 (cross)	51	--	--	51	15 : 20
3 (cross)	52	--	--	52	14 : 10
4 (cross)	52	--	--	52	13 : 20

Specimen (direction)	Radiant flux [kW/m²]				Maxi. light attenuation	Integral of smoke obscuration
	after 10 min [HF-10]	after 20min [HF-20]	after 30 min [HF-30]	at Self extinguishing [CHF]	[%]	[%.min]
1 (length)	3.7	--	--	3.7	9.4	43
2 (cross)	3.5	--	--	3.5	21.2	61
3 (cross)	3.3	--	--	3.3	29.8	82
4 (cross)	3.3	--	--	3.3	24.8	80

Mean value of critical radiant flux 1)	**3.4 kW/m²**
Mean value of integral of smoke obscuration 2)	**74 %.min**

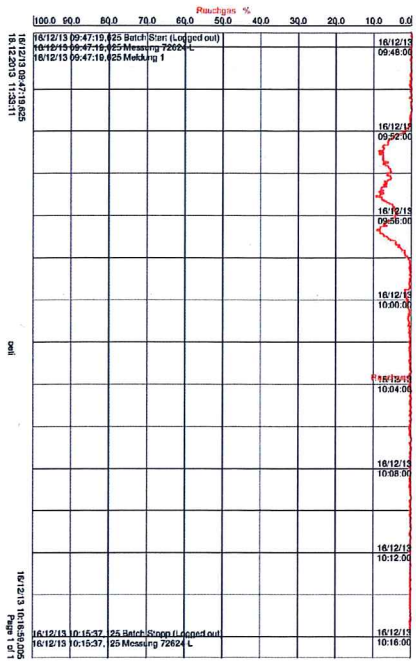
Remarks:
1) The mean value of the critical radiant flux is calculated from the results of HF-30 or CHF of the three specimens with the same direction. If both values are stated, the lowest one is taken for calculation.
2) The mean value of the integral of smoke obscuration is calculated from the results of the three specimens with the same direction.

Measuring point [mm]	Time [min : sec] at which the flames are reaching the measuring points			
	Specimen 1 (length)	Specimen 2 (cross)	Specimen 3 (cross)	Specimen 4 (cross)
50	2 : 00	2 : 00	2 : 00	2 : 00
100	2 : 00	2 : 00	2 : 00	2 : 00
150	2 : 00	2 : 00	2 : 00	2 : 00
200	2 : 10	2 : 10	2 : 00	2 : 00
250	2 : 20	2 : 20	2 : 10	2 : 10
300	2 : 30	2 : 30	2 : 20	2 : 20
350	2 : 40	4 : 40	2 : 30	2 : 30
400	3 : 40	2 : 50	2 : 40	2 : 40
450	3 : 50	3 : 00	3 : 00	3 : 00
500	---	3 : 20	3 : 30	3 : 30

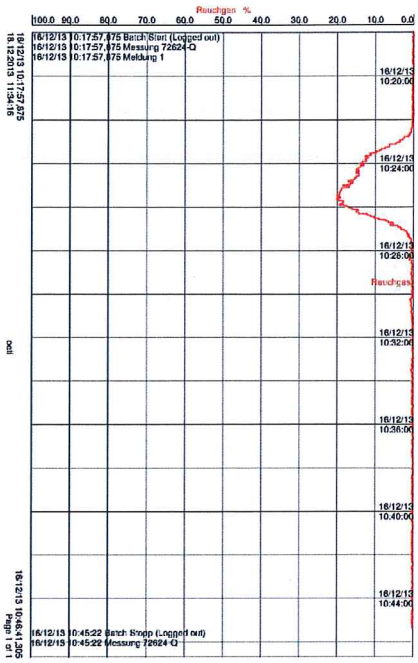
Observations during the test:
After-glow-time (after extinguishing): 5 minutes

2.7 Diagrams of integrated smoke obscuration

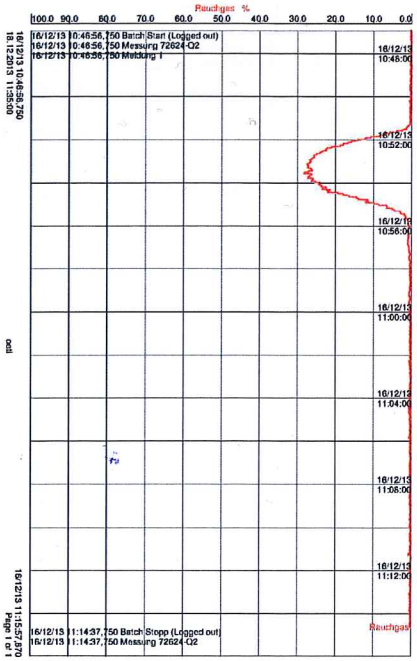
Specimen 1 (length)



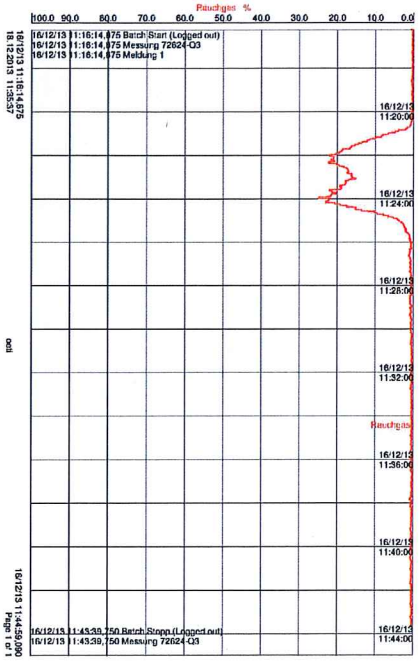
Specimen 2 (cross)



Specimen 3 (cross)

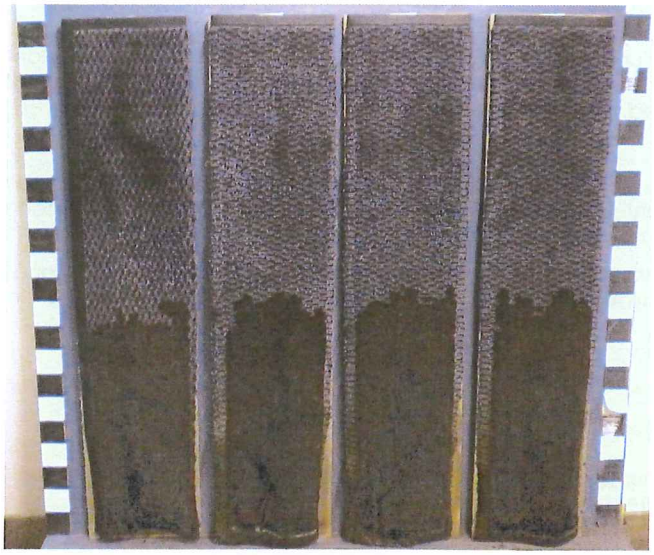


Specimen 4 (cross)



2.8 Appearance of specimens after test

This photo shows the specimens 1 to 4 (from left to right side). One section of the rule is equivalent to 5 cm.



2.9 Reaction to fire tests – Ignitability of building products subjected to direct impingement of flame

Test conditions

According to EN ISO 11925-2 accr.)
Conditioning: according EN 13238 (4.3)
Substrate: Fibre cement boards according EN 13238 (5.1.2)
Arrangement of the samples: loose laid
Number of specimen: 3 in length, 3 in cross direction (250 mm x 90 mm)
Exposure conditions: Surface exposure
Flame application time: 15 s

Statement
The test results relate to the behaviour of the test specimens of the products under the particular conditions of the test; they are not intended to be the sole criterion for assessing the potential fire hazard of the products in use.

Test results

Tested sample: 1

	Length direction			Cross direction		
Specimen	1	2	3	1	2	3
Ignition	yes	yes	yes	yes	yes	yes
Flaming debris	no	no	no	no	no	no
Ignition of filter paper	no	no	no	no	no	no
Reaching the measuring mark (150 mm)	no	no	no	no	no	no
Time to reach the measuring mark	-	-	-	-	-	-

Special observations during the test:
The samples are extinguished after approximately 3 seconds itself. The measurement mark was not achieved.

3 Remarks

Validity

There are no regulations concerning duration of validity in the individual test standards. As the results of the examinations refer only to the submitted and examined samples, the report is valid for these for an unlimited period. A period of validity specified as part of an expert evaluation is in the discretion of the consultant or the ÖTI.

The applicability of results and expert evaluations for materials not tested is in the responsibility of the applicant. Whereby an apportionment of results as well as any specified period of validity can only be done for identically constructed products and only as long as the product produced unchanged.

Possible national or international restrictions concerning the terms of usability of test and classification reports have to be considered; this is not the responsibility of the test laboratory.

Sample Material

Results of performed tests only refer to the sample material provided.

Without explicit written other agreement testing is destructive and the sample material is transferred to the property of ÖTI, which is entitled to freely decide on storage and disposal.

Issuance

The valid first issue is done in paper and has single-handed signatures. For reference purposes and filing an unsigned electronic duplicate can be delivered in pdf format. Duplicates and translations will be marked accordingly on the cover sheet.

Quality management, Accreditation and Notification

All tests and services are performed under a quality management system according to EN ISO/IEC 17025 respectively EN ISO/IEC 17065.

The ÖTI is accredited as Testing Laboratory and Certification Body for products. It also is a Notified Body for several directives with the registration number 0534 (see http://ec.europa.eu/enterprise/newapproach/nando/). Accreditation as Testing Laboratory was provided by Akkreditierung Austria (Federal Ministry of Economy, Family and Youth). The scope of accreditation is listed on www.bmwfj.gv.at/akkreditierung.

In this report test conditions of individual accredited test procedures are marked with *accr.)*

According to the decree on the use of the accreditation mark ("AkkZV") the accreditation mark is only to be used by the accredited Conformity Assessment Body.

Application of the registration number of the Notified Body: As to personal protective equipment (PPE) the requirements of PSA-SV § 10, BGBl. Nr. 596/1994 as amended and article 13 of the Directive 89/686/EEC have to be kept. With construction products the application is only permitted within the declaration of performance for CE-marking.

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End of Report