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Materials Science & Technology

Bru Textiles
Satenrozen 2A
B - 2550 Kontich

Test Report N° 5214004348

Test assignment	**Determination of the Flammability and of the Smoke Density of textiles non fixed to buildings according to the Directive of the Fire Police, testing of construction materials and parts, version 1988, according to SN 198898 (1987) ; Smoke determination acc. VKF**
Client	Bru Textiles; B - 2550 Kontich
Test object	**>> FR - One Venere <<**
Client's ref	Mrs. Tineke Verbruggen
Order dated	03.12.2013
Test object received	04.12.2013
Test performed	17.12.2013 + 07.01.2014
Number of pages	4
Attachments	-

This report has a validity of five years (Valid till 13.01.2019).

401 - bpa - controlled by

Empa, Swiss Federal Laboratories for Materials Science and Technology
St. Gallen, 13.01.2014

Expert

SWISS TESTING
STS 083

Patrizia Ballistreri

Test sample (decl.)

Object	**>> FR - One Venere <<**
Material	100% Polyester inherent FR
Weight approx.	150g/m^2
Colour	purple *(patterned)*

Determination of the flammability according to SN 198'898 (1987)

Test conditions

Conditioning

Samples	min. 24h at (20 ± 2) °C / (65 ± 5) % rH.
Pre-treatment	none, wash durability not tested!

Test procedure

The conditioned samples at a climate according to SNV 95150 are hung in a defined burning chamber and are put into contact at the lower edge with a defined (40 ± 2)mm long Propane gas flame during 3s and 15s. The burner is inclined by 30° relatively to the vertical line.

The damaged length and the afterglow time are assessed for samples which do not ignite; for those which extinct in the measuring length, the afterflame time is also assessed. For all other samples, the rate of flame spread between two markings is determined.

Requirements

Peak of flame **≤ 400mm**
Afterflame time max. **5s**
Afterglow time max. **300s**
Damaged length max. **150mm**
18 of **20** samples have to fulfil the Requirements

Results

Test condition as delivered (wash durability not tested!)

Sample N°	Flamespread time mm/s	Afterflame time s	Afterglow time s	Damaged length mm	melt and /or dropp off
Lengthwise: Ignition time 3s					
1	-	**3**	**-**	**75**	**melt and dropp off *)**
2	-	**5**	**-**	**95**	**melt and dropp off**
3	-	**4**	**-**	**93**	**melt and dropp off *)**
4	-	***24***	**-**	**106**	**melt and dropp off *)**
5	-	***7***	**-**	**56**	**melt and dropp off *)**
Lengthwise: Ignition time 15s					
1	-	**-**	**-**	**106**	**melt and dropp off *)**
2	-	**-**	**-**	**88**	**melt and dropp off *)**
3	-	**4**	**-**	**135**	**melt and dropp off *)**
4	-	**-**	**-**	**91**	**melt and dropp off *)**
5	-	**3**	**-**	**109**	**melt and dropp off *)**
Crosswise: Ignition time 3s					
1	-	**-**	**-**	**50**	**melt**
2	-	**-**	**-**	**52**	**melt**
3	-	**0**	**-**	**67**	**melt and dropp off**
4	-	**-**	**-**	**53**	**melt**
5	-	**-**	**-**	**73**	**melt**
Crosswise: Ignition time 15s					
1	-	**-**	**-**	**92**	**melt and dropp off**
2	-	**-**	**-**	**95**	**melt**
3	-	**-**	**-**	**109**	**melt and dropp off *)**
4	-	**-**	**-**	**102**	**melt and dropp off *)**
5	-	**-**	**-**	**99**	**melt and dropp off**

***) burning droplets**

Determination of the Smoke Density Following VKF

Test Principle and Procedure

The test procedure for determining the smoke density consists in exposing a defined test body of (30 x 30 x 4) mm at least 2g to a defined flame in a standardized device with a defined air flow, and that till the sample has been burnt down. In the course of this test, the maximum measurable light absorption of the so generated smoke is determined by photometry. The smoke density is determined in three tests. Should the results not agree, up to six tests will be effected and the maximum and minimum values crossed off; the average of the results is indeed decisive for the classification.

Classification

Classification		demand	
Smoke generation 1	(strong smoke generation)	Maximum light Absorption	> 90%
Smoke generation 2	(medium smoke generation)	Maximum light Absorption	> 50 - 90%
Smoke generation 3	(slight smoke generation)	Maximum light Absorption	0 - 50%

Results

Test body 2g; Sample holder bowl

Maximum light absorption	82%	(average value of 3 samples) (individual values 83 / 84 / 79 %)

Class 2 (medium smoke generation)

Classification Following the Directive for Fire Police Prescriptions, Building Materials and Building Elements, Part B (Test Conditions), Edition 1988

Fire Protection Classification : 5.2

(class 5.2 stands for "low combustible / medium smoke generation")

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