Report 53611

Test Report

Applicant

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Reference

Mrs. Ormstrup

Application

Testing and classification of use area according prEN 15114, stair and castor chair suitability, fraying resistance, electrical propensity and vertical resistance.

Test Material

"epoca globe wt"

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

Issuing and Signatures

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Contents

1 Order

1.1 Chronology

Date	*Received*	*Order*
2006-10-18	2006-10-19	Testing and classification of use area according prEN 15114, stair and castor chair suitability, fraying resistance, electrical propensity and vertical resistance.

1.2 Samples

No.	*Received*	*Sample Identification*	*Sample Material*
1	2006-04-24 (1)	"epoca globe wt"	Textile floor covering, approx. 1,6 m
2	2006-04-24 (1)	"epoca globe wt"	Textile floor covering, approx. 1,6 m
3	2006-10-19 (1)	"epoca globe wt"	Textile floor covering, approx. 1,2 m

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

2 Preliminary Notes

Most of the tests were carried out with report number 52020 (dated 8th July 2006) these tests are identified in this report. With test report 52020 the specimen was named differently but in fact it is according to the information given by the applicant the same quality (construction and material).

3 Findings / Tests performed

3.1 Description of specimen

According to ISO 2424

Tested sample: 1

Dimensions: rolls
Manufacturing procedure: woven
Structure of face side: rib structure
Coloration of face side: multicoloured patterned
Type of backing: textile secondary backing
Material of use surface: 100 % polyamide (according to the specification by the applicant)

3.2 Determination of mass per unit and pile mass total

Test conditions

According ISO 8543
Test atmosphere: 20° C / 65 % rel. humidity
Type of shearing apparature: Sharp pointed knife
Number of samples: 4
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

	mass per unit area
Mean value [g/m²]	**2165**
Coefficient of variation [%]	1,8
Confidence interval (P = 95 %) absolute width [g/m²]	± 63

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.

3.3 Determination of thickness

Test conditions

Testing according ISO 1765
Test atmosphere: 20° C / 65 % rel. humidity
Number of specimens: 4
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

	thickness
Mean value [mm]	**4,0**
Coeffizient of variation [%]	1,0
Coeffizient interval (P=95 %) absolute width [mm]	± 0,1

3.4 Determination of colour fastness to rubbing

Test conditions

According to EN ISO 105-X12
Used rubbing finger: rectangle 19 mm x 25,4 mm
Downward force: (9 ± 0,2) N
Percentage of soak (only rubbing wet): 100 %
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 2

Staining of the cotton rubbing cloth:		
Colourfastness, dry rubbing:	Longitudinal direction:	Numerical rating: **5**
	Cross direction:	Numerical rating: **5**
Colourfastness, wet rubbing:	Longitudinal direction:	Numerical rating: **5**
	Cross direction:	Numerical rating: **5**

Note: Comment on assessment of colour fastness see enclosure.

3.5 Determination of colour fastness to water

Test conditions

According to EN ISO 105-E01
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 2

Change in colour:	Numerical rating: **5**
Staining of adjacent fabric:	
- Adjacent fabric 1: wool	Numerical rating: **4**
- Adjacent fabric 2: polyacrylnitril	Numerical rating: **4 - 5**
- Adjacent fabric 3: polyester	Numerical rating: **4 - 5**
- Adjacent fabric 4: polyamide 6.6	Numerical rating: **3**
- Adjacent fabric 5: cotton	Numerical rating: **4 - 5**
- Adjacent fabric 6: 2 ½ acetate	Numerical rating: **4 - 5**

Note: Comment on assessment of colour fastness see enclosure.

3.6 Determination of fibrebind of synthetic looppile carpets

Test Conditions

Testing according EN 1963, Test C
Evaluation according: EN 1307
Duration: 400 double passages
Note: The test was performed under report number 52020, dated 8th July 2006.

Test Results

Tested sample: 1

Assessment of appearance change: better than photostandard

Evaluation

The specimen fulfills the requirements of EN 1963 or 1307.

3.7 Determination of the sensitivity to spilled water

Test conditions

According to EN 1307 Annex F
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

Change in colour:	Numerical rating: **5**

3.8 Determination of Assessment of impregnations in needled floor coverings by means of a soiling test

Test Conditions

According to EN 1269
Applied test method: Test method B (Tetrapod)

Tested colours: Colour 1: brown
Deviation from standard: Only one colour was tested.
Note: The test was performed under report number 52020, dated 8th July 2006.

Test Results

Tested sample: 1

	Grey scale rating colour 1
Median	4 - 5

3.9 Determination of dimensional changes after exposure to heat and water

Test conditios

According to ISO/PAS 17 984, method 3
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

		Dimensional change	
		length	cross
1. Treatment 2 hours drying at 60 °C	1. Measurement	- 0,4 %	- 0,2 %
	2. Measurement	- 0,5 %	- 0,1 %
	3. Measurement	- 0,4 %	- 0,3 %
	Mean value	***- 0,4 %***	***- 0,2 %***
2. Treatment 2 hours water 20 °C	1. Measurement	- 0,5 %	- 0,1 %
	2. Measurement	- 0,4 %	± 0,0 %
	3. Measurement	- 0,3 %	- 0,1 %
	Mean value	***- 0,4 %***	***- 0,1 %***
3. Treatment 24 hours drying at 60 °C	1. Measurement	- 0,9 %	- 0,2 %
	2. Measurement	- 1,1 %	- 0,2 %
	3. Measurement	- 1,2 %	- 0,4 %
	Mean value	***- 1,1 %***	***- 0,3 %***
4. Treatment 48 hours standard climate	1. Measurement	- 0,9 %	- 0,1 %
	2. Measurement	- 0,9 %	- 0,2 %
	3. Measurement	- 0,7 %	- 0,3 %
	Mean value	***- 0,8 %***	***- 0,2 %***

Note: A plus sign (+) is used to indicate an increase and a minus sign (-) is used to indicate shrinkage in dimensions.

Description of the final appearance: no deformation

3.10 Determination of hairiness (pilling)

Test Conditions

Testing according EN 1963, test D
Duration: 100 and 200 double passages
Note: The test was performed under report number 52020, dated 8th July 2006.

Test Results

Tested sample: 1

	Assessment of appearance according Photo standard	
	after 100 double passages	after 200 double passages
Total median	**5**	**5**

3.11 Determination of changes in appearance – Drum Test

Test conditions

According to EN 1307 and ISO/TR 10 361
Assessment according EN 1471
Number of drum revolutions: 5 000 and 22 000
Number of specimens: 1
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

	5 000 revolutions	**22 000 revolutions**
Index of appearance change (median):	5,0	4,5
Index of colour change (median):	5	4 - 5
Main reasons for change:	--	colour + structure
Index after colour correcture (median):	**5,0**	**4,5**
Index after colour correcture (mean):	**5,0**	**4,5**

Assessment indices: Index 1 – high change, Index 5 – no change

Demages by the treatment: none

3.12 Determination of the mass loss of textile floor coverings using the Lisson Tretrad machine

Test conditions

According to EN 1963, test A
Soles: Vulcanised SBR-rubbers with a wave profile
Number of treads: 2300
Adjustment of wheel height: - 5 mm
Number of specimens: 4
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

	Mass loss per unit area (m_v)		Relative mass loss (m_{rv})	
Mean value	**5**	**g/m²**	**0,2**	**%**
Coefficient of variation	25,5	%	25,5	%
Confidence interval (P = 95 %) absolute width	± 2	g/m²	± 0,1	%

Tretradindex: --

3.13 Determination of general structural integrity

Test conditions

Testing according: EN 985, test C
Test apparatus: castor chair test equipment from Feingerätebau Baumberg
Typ of castors: steering single-roll, type H
Note: The test was performed under report number 52020, dated 8th July 2006.

Test Results

Tested sample: 1

Duration	Damages by the treatment
10 000 cycles	none
25 000 cycles	none

3.14 Determination of castor chair suitability of textile floor coverings

Test conditions

According to EN 985, Method A
Test apparatus: castor chair test equipment from Feingerätebau Baumberg
Castors according EN 985
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

Number of revolutions	Index of appearance change	Index of colour change
after 5 000 revolutions	4,0	3 - 4
after 25 000 revolutions	3,0	3

Note: Index 1 - high change
Index 5 - no change

Main reasons influencing the assessment:
after 5 000 revolutions: colour
after 25 000 revolutions: colour

Castor chair index(r): 3,8

According to the specifications of EN 1307 the specimen can be classified as:
suitable for continous use

Damages by the treatment: none

3.15 Determination of electrical resistances

Test conditions According to ISO 10965
Test atmosphere: 23°C ± 1°C / 25% ± 3% rel. humidity
Circuit voltage: 500 V
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

Sample	Measurement	Vertical resistance	Horizontal resistance
1	1	4,8 x 10^{10} Ω	8,0 x 10^{11} Ω
	2	5,4 x 10^{10} Ω	1,1 x 10^{12} Ω
2	1	5,0 x 10^{10} Ω	8,8 x 10^{11} Ω
	2	5,5 x 10^{10} Ω	1,1 x 10^{12}Ω
3	1	5,0 x 10^{10} Ω	7,9 x 10^{11} Ω
	2	5,5 x 10^{10} Ω	9,8 x 10^{11} Ω
Geometric mean value		**5,2 x 10^{10} Ω**	**9,3 x 10^{11} Ω**

3.16 Assessment of static electrical propensity – walking test

Test Conditions

According to ISO 6356
Testing atmosphere: 23°C ± 1°C / 25% ± 3% rel. humidity
Base plate: Isolating rubber mat on metal plate
Sole-material: XS-664P Neolite
Pretreatment: none
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

	Supplied condition
Measurement 1	+ 0,6 kV
Measurement 2	+ 0,5 kV
Measurement 3	+ 0,4 kV
Mean value	**+ 0,5 kV**

Judgement

The tested sample in supplied condition can be classified as antistatic according EN 14041:2004.

3.17 Classification of the suitability for use on stairs

Test conditions

According to EN 1963
Test methode: Test B: nosing test
Note: The test was performed under report number 52020, dated 8th July 2006.

Test results

Tested sample: 1

Overall median of the appearance change in the edge area: **Note 3**

Judgement note: Note 1 - extreme appearance change
Note 2 - moderate appearance change
Note 3 - low appearance change

Classification

According to EN 1963 the specimen can be classified as **suitable for use area 4 ("extreme") – corresponds to class 33.**

Note: A workmanlike construction of the stair nose with a rounding radius of at least 10 mm is presupposed to the judgement.

3.18 Determination of the resistance to fraying

Test conditions

Testing according to EN 1814:2005
Number of test samples: 4
Kind of test sample: Sheet materials

Test results

Tested sample: 3

Damages on cut edge after treatment: None

Judgement

The tested specimen must be classified as **resistant to fraying**.

3.19 Comment on assessment of colour fastness

The assessment of change of colour is based on the extent of the visible contrast between treated and untreated specimen. This difference in coloration will be visually compared with the contrasts defined by the five pairs of neutral grey colour on the grey scale „Change in colour" according to ISO 105-A02. Each step of the grey scale corresponds to a fastness-rating, starting with numerical rating 5 (no contrast) up to numerical rating 1 (maximum contrast).

Index for change in colour:

Bl = bluer	W = weaker
G = greener	Str = stronger
R = redder	D = duller
Y = yellower	Br = brighter

Staining of the adjacent fabric will be evaluated with the grey scale for assessing staining according to ISO 105-A03.
The steps of the grey scale are within the ratings „5" - no contrast (non-staining of the adjacent fabric) and „1" - maximum contrast (strong staining of the adjacent fabric).
A separate numerical rating is given for staining of each kind of adjacent fabric.

3.20 Summary of Results

	"epoca globe wt"	
Details		
- material of use surface(by the applicant)	100% polyamide	
- Total mass per unit area	2135 g/m²	
- Total thickness	4,0 mm	
Colour fastness to rubbing		
- dry rubbing	numerical rating 5	
- wet rubbing	numerical rating 5	
Colour fastness to water		
- colour change	numerical rating 5	
- Staining of adjacent fabric (PA 6.6)	numerical rating 3	
Fibre bind, EN 1963, methode C	requirements fulfilled	
Sensitivity to spilled water		
- change in colour	grade 5	
Soiling test – assessment of impregnation	grade 4-5	
Dimensional stability	length direction	cross direction
- max. dimensional change	-0,8 %	-0,3 %
Fibre bind, EN 1963, methode D	grade 5	
Change in appearance – drum test	Median	Mean value
- Grade after colour correcture – 5000 cycles	grade 5,0	grade 5,0
- Grade after colour correcture – 22000 cycles	grade 4,5	grade 4,5
Mass loss		
- Mass loss per unit area	5 g/m²	
- relative mass loss	0,2 %	
General resistance, EN 985, methode C	no damages	
Classification according prEN 15114 (05/2006)		
- Basic requirements	fulfilled	
- Level of use classification	class 33	
- Luxury class	LC1	
Stair suitability	suitable for wear class 4 *)	
Castor chair suitability	A – suitable for permanent use (r= 3,8)	
Electrical resistance		
- vertical resistance	$5{,}2 \times 10^{10}$ Ω	
- horizontal resistance	$9{,}3 \times 10^{11}$ Ω	
- Walking test	+0,5 kV	
- Classification	antistatic	
Resistance to fraying	resistant	

*) corresponds to class 33

4 Remarks

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.

Quality management and accreditations

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

ÖTI is accredited by several organisations for various tests offered. It also is a Notified Body with the registration number 0534. The accreditation by the Federal Ministry as testing laboratory was repeated under reference 92714/0574-I/12/2005 (Individual accredited test procedures are marked with the federal laboratory logo), the accreditation for testing and surveillance of building products was given by the OIB (Österreichisches Institut für Bautechnik). Details and other accreditations are given on request and can be found on www.oeti.at.

Issuance

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