



## Report 62807

### Test Report

#### *Applicant*

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DÄNEMARK

#### *Reference*

Mrs. Ormstrump

#### *Application*

Testing and classification according to EN 15114.

#### *Test Material*

"micro 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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## 1 Order

### 1.1 Chronology

<i>Date</i>	<i>Received</i>	<i>Order</i>
2010-01-26	2010-02-01	Testing and classification according to EN 15114.

### 1.2 Samples

<i>No.</i>	<i>Received</i>	<i>Sample Identification</i>	<i>Sample Material</i>
1	2010-02-01 (1)	"micro wt"	textile floor covering, approx. 2 m

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



## 2 Findings / Tests performed

### 2.1 Description of specimen

Description of specimen according to ISO 2424

#### Test Results

Sample tested: 1

Dimensions:	rolls
Manufacturing procedure:	woven (flat carpet)
Structure of face side:	loop pile
Coloration of face side:	multicoloured unpatterned
Type of backing:	textile secondary backing
Type of fibres at face side *):	100% Polyamide (according to the specification by the applicant)

According to EN 15114, this is a textile floor covering without pile.

\*) In accordance with the at present valid version of the appropriate European Directives; fibre materials less than 2 % are not considered

### 2.2 Determination of mass per unit area

#### Test conditions

According ISO 8543

Test atmosphere: 20° C / 65 % rel. humidity

Number of specimens: 4

#### Test results

Tested sample: 1

	Mass per unit area
<b>Mean value</b>	<b>2059 g/m<sup>2</sup></b>
Coefficient of variation	1,1 %
Confidence interval (P = 95 %) absolute width	± 36 g/m <sup>2</sup>



## 2.3 Determination of thickness

### Test conditions

Testing according ISO 1765  
Test atmosphere: 20° C / 65 % rel. humidity  
Number of specimens: 4

### Test results

Tested sample: 1

	total thickness
Mean value	3,2 mm
Coeffizient of variation	1,5 %
Coeffizient interval (P=95 %) absolute width	± 0,1 mm

## 2.4 Determination of hairiness (pilling)

### Test Conditions

Testing according EN 1963, test D  
Duration: 200 double passages

### Test Results

Tested sample: 1

Samples	Assessment of appearance after 200 double passages according Photo standard	
	longitudinal direction	cross direction
Total Median	4,5	4,5
Worst Result	4,5	

### Evaluation

The specimen fulfills the requirements of EN 1470.



## 2.5 Determination of dimensional changes after exposure to heat and water

### Test conditions <sup>A</sup>

According to ISO/PAS 17 984, method 3

### Test results

Tested sample: 1

		Dimensional change [%]	
		length	cross
<b>1. Treatment</b> 2 hours storage (drying) at 60 °C	1. Measurement	-0,3	-0,1
	2. Measurement	-0,3	-0,2
	3. Measurement	-0,3	-0,2
	<b>Mean value</b>	<b>-0,3</b>	<b>-0,2</b>
<b>2. Treatment</b> 2 hours storage in water at 20 °C	1. Measurement	-0,1	±0,0
	2. Measurement	-0,1	±0,0
	3. Measurement	-0,1	±0,0
	<b>Mean value</b>	<b>-0,1</b>	<b>±0,0</b>
<b>3. Treatment</b> 24 hours storage (drying) at 60 °C	1. Measurement	-0,5	-0,2
	2. Measurement	-0,6	-0,2
	3. Measurement	-0,6	-0,2
	<b>Mean value</b>	<b>-0,6</b>	<b>-0,2</b>
<b>4. Treatment</b> 48 hours storage at standard climate	1. Measurement	-0,6	-0,3
	2. Measurement	-0,7	-0,2
	3. Measurement	-0,6	-0,2
	<b>Mean value</b>	<b>-0,6</b>	<b>-0,2</b>

Description of the final appearance: **no deformation**

Note:

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



## 2.6 Determination of the basic requirement of carpets without pile

### Test conditions <sup>A</sup>

According to EN 15114:2008

### Test results

Tested sample: 1

	Basic requirements	Test results
<b>Colour fastness to <sup>a)</sup></b>		
♦ Light	≥ 5 (pastel shade <sup>b)</sup> ≥ 4)	Conformity to be declared by the manufacturer for each colour
♦ Rubbing		
- dry	≥ 3-4	
- wet	≥ 3	
♦ Water – change in colour		
- plain carpets	≥ 3-4	
- other carpets	≥ 4	
♦ Water – staining <sup>c)</sup>		
- - all carpets	≥ 2-3	
<b>Hairiness/ Pilling<sup>e)</sup></b>	≥ 2-3	4,5
<b>Colour change <sup>d)</sup></b>		
♦ Due to spilled water	≥ 4	Conformity to be declared by the manufacturer for each production run
♦ Due to soiling subsequent to spilled water	≥ 3	
<b>Dimensional change<sup>f)</sup></b>	Shrinkage (both directions): ≤ 1,2% Expansion (both directions): ≤ 0,5%	Length: -0,6% Cross: -0,2%

a) Conformity to be declared by the manufacturer for each colour

b) Pastel shade: colour corresponding to a standard depth ≤ 1/12 (in accordance with EN ISO 105-A01)

c) On multi fibre: worst result

d) Conformity to be declared by the manufacturer

e) Worst result (of longitudinal or cross direction)

f) Not valid for tiles (see Annex A), not valid for permanently glued floor coverings.

### Judgement

The tested material fulfills the basic requirements of carpets without pile according to EN 15114:2008, point 4.



## 2.7 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

### Test results

Tested sample: 1

	5 000 revolutions	22 000 revolutions
Index of appearance change (median)	5	5
Index of colour change (median)	5	5
Main reasons for change	--	--
<b>Index after colour correction (median)</b>	<b>5</b>	<b>5</b>
<b>Index after colour correction (mean)</b>	<b>5</b>	<b>5</b>
Demages by the treatment	none	

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

## 2.8 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: 2000  
Adjustment of wheel height: -5 mm  
Number of specimens: 4

### Test results

Tested sample: 1

	Mass loss per unit area [m <sub>v</sub> ]	Relative mass loss [m <sub>r</sub> ]
<b>Mean value</b>	no mass loss	
Coefficient of variation		
Confidence interval (P = 95 %) absolute width		

Note:

The primary function of the test with the "Lisson-Tretrad-Machine" is to obtain from textile floor coverings a criteria for the wear performance in practical use. The used "Lisson-Tretrad" with four feet – which are covered with changeable rubber soles – runs on a straight line forwards and backwards, with a slip of 20 % and a surface pressure of 150 N, on the surface of the test specimen (which is lying on a test table). After a defined count of reciprocating motion the mass loss will be ascertained.



## 2.9 Determination of general structural integrity

### Test conditions

Testing according: EN 985, test C

Test apparatus: castor chair test equipment from Feingerätebau Baumberg

### Test Results

Tested sample: 1

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

## 2.10 Determination of the castor chair suitability of textile floor coverings

### Test conditions

According to EN 985, Method A

Test apparatus: castor chair test equipment, Typ: Feingerätebau Baumberg

Castors: according EN 985

### Test results

Tested sample: 1

Test duration	change of attribute	Index of colour change *)	Index of appearance change *)
5 000 revolutions	colour	4-5	4,5
25 000 revolutions	colour	4	4,0
<b>Castor chair index (r)</b>		<b>4,4</b>	

\*) Note: Index 1 - high change / Index 5 - no change

Damages by the treatment: none

### Classification

According the specifications of **EN 15114** the specimen can be classified as:

**"suitable for intensive use"**



## 2.11 Classification of carpets without pile

### Test conditions

According to EN 15114:2008

### Test results

Tested sample: 1

Material of the use surface (by the applicant)	100% Polyamide
Specification of the change in appearance	
Drum test ♦ Short term [5.000 turns]	5
(Vettermann) ♦ Long term [22.000 turns]	5
Specification of wear behaviour	
Lisson-Tretrad ♦ Mass loss $m_v$ (g/m <sup>2</sup> )	no mass loss
Specification of general structural integrity	
Damages by the ♦ Short term [10.000 turns]	no damages by the treatment
treatment ♦ Long term [25.000 turns]	no damages by the treatment

### Classification

Classification of change in appearance	class 33
Classification of wear behaviour	class 33
Classification of general structural integrity	class 33
<b>Overall use class</b>	<b>class 33</b>
<b>Luxury rating class</b>	<b>LC1 *)</b>

\*) : Carpets without pile are classified in luxury rating class LC1 according to EN 15114 point 6.

### Explanations:

Textile floor coverings are classified to their suitability in different use classes. There are three essential characteristics for the classification: change in appearance, wear behaviour and general structural integrity. These three characteristics serve the description of the use behaviour in dependence to the intensity of use. **The use class assigned to the carpet is the lowest one that was reached after the testing.** The different use classes are described as followed:

Domestic		Commercial	
Class	Use intensity	Class	Use intensity
21	moderate / light	---	---
22	general / medium	---	---
22+	general	31	light
23	heavy	32	general
---	---	33	heavy



The use- and comfort-classes are corresponding to the following till now common judgements for the wear- and comfort behaviour.

Level of use classification		"use class"
EN 15114	EN 1307:1997	
21	1	low
22	2	normal
22+ / 31		
23 / 32	3	heavy
33	4	extreme

Luxury rating class	"luxury value"
LC 1	plain
LC 2	good
LC 3	high
LC 4	luxurious
LC 5	prestige

## 2.12 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: 1  
Damages on cut edge after treatment: no deformation

### Judgement

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

## 2.13 Classification of the suitability for use on stairs

### Test conditions

According to EN 1963; Test method B: nosing test

### Test results

Tested sample: 1

Appearance change*) in the edge area	low appearance change
--------------------------------------	-----------------------

\*)complete mean

### Classification

According to EN 15114 the specimen can be classified as suitable

**"for permanent use"**

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



## 2.14 Assessment of static electrical propensity – walking test

### Test Conditions

According to ISO 6356  
Testing atmosphere:  $23 \pm 1$  °C /  $25 \pm 3$  % rel. humidity  
Base plate: Isolating rubber mat on metal plate  
Sole-material: XS-664P Neolite  
Pretreatment: none

### Test results

Tested sample: 1

Supplied condition			
Measurement 1	Measurement 2	Measurement 3	Mean value
-1,0 kV	-0,6 kV	-0,6 kV	-0,7 kV

### Judgement

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





## 3 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 for several directives with the registration number 0534 (see <http://ec.europa.eu/enterprise/newapproach/nando/>). The accreditation by the Federal Ministry of Economy, Family and Youth as testing laboratory was repeated under reference 92.714/0560-1/12/2009 (Individual accredited test procedures are marked with the federal laboratory logo), the accreditation for testing and inspection of construction products was given by the OIB (Austrian Institute of Construction Engineering). Details and other accreditations are given on request and can be found on [www.oeti.at](http://www.oeti.at).

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