



Report VN720 132044.1 Test Report

Applicant

EGETAEPPER A/S
Industrivej Nord 25
7400-Herning
Denmark

Reference

Lenette Ormstrup

Application

Testing and classification according EN 1307, stair suitability, fraying resistance and electrical behaviour.

Test material

"epoca silky wt"

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: 12

Original Issue / Vienna 08.08.2017 / AA / 201

Authorised for Institute
Ing. Hannes Vittek

A handwritten signature in blue ink, reading "i.v. Zambach", written over a horizontal dotted line.

Contents

1	Order	2
1.1	Chronology	2
1.2	Samples	2
2	Findings / Tests performed.....	3
2.1	Description of specimen	3
2.2	Determination of mass per unit and pile mass per unit area.....	3
2.3	Determination of thickness and thickness of wear layer	4
2.4	Calculation of surface pile density and pile fibre volume ratio	4
2.5	Determination of number of tufts or loops	5
2.6	Determination of the mass loss of textile floor coverings using the Lisson Tretrad machine	5
2.7	Determination of changes in appearance – Drum Test.....	6
2.8	Determination of the resistance to fraying.....	6
2.9	Determination of the basic requirement of pile carpets.....	7
2.10	Classification of pile carpets	8
2.11	Determination of electrical resistances.....	9
2.12	Assessment of static electrical propensity – walking test.....	10
2.13	Summary of Results	11
3	Remarks	12

1 Order

1.1 Chronology

Date	Received	Order
16.03.2006	16.03.2006	Testing and classification according EN 1307, stair suitability, fraying resistance and electrical behaviour.

1.2 Samples

Nr.	Received	Sample Identification
1	16.03.2006	“epoca silky wt”

(Unless otherwise stated samples are provided by the customer.)

2 Findings / Tests performed

2.1 Description of specimen

Description of specimen according to ISO 2424

Test results

Tested sample: 1

Manufacturing procedure:	Tufted
Type of face side:	Cut pile (shag)
Type of backing:	textile secondary backing
Type of coloration / pattern:	multicoloured unpatterned
Type of fibres at face side *):	100% Polyamide (according to the applicant)
Dimensions:	rolls
Type of floor covering:	Pile carpet

*) According to the current version of the relevant European Directives, fibre materials with a mass percentage of < 2 % are not specified

The submitted specimen is a Pile carpet according to EN 1307.

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

Test conditions

According ISO 8543

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

Type of shearing apparatus: Sharp pointed knife

Number of samples: 4

Test results

Tested sample: 1

	mass per unit area	pile mass per unit area
Mean value [g/m²]	3047	1224
Coefficient of variation [%]	0,3	0,3
Confidence interval (P = 95 %) absolute width [g/m ²]	± 16	± 6

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

Determination of thickness of wear layer according to ISO 1766

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

Shearing method: Sharp pointed knife

Number of samples: 4

Test results

Tested sample: 1

	thickness	thickness of wear layer
Mean value [mm]	11,5	9,0
Coefficient of variation [%]	0,9	1,1
Confidence interval (P = 95 %) absolute width [mm]	± 0,2	± 0,2

2.4 Calculation of surface pile density and pile fibre volume ratio

Test conditions

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

Pile material:	100 % Polyamide
Density of pile material [g/cm³]:	1,14
Mass of pile per unit area [g/m²]:	1224
Thickness of above the substrate pile [mm]:	9,0

Test results

Tested sample: 1

Surface pile density [g/cm³]	0,136
Relative surface pile density [%]	11,9

2.5 Determination of number of tufts or loops

Test conditions

According to ISO 1763

Test results

Tested sample: 1

Number of tufts or loops / 10 cm:	
in length direction:	20,5
in cross direction:	25,3
Number of tufts or loops per dm ² :	519
Number of tufts or loops per m ² :	51900

2.6 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: ± 0 mm

Number of specimens: 4

Test results

Tested sample: 1

	Mass loss per unit area (m _v)	Relative mass loss (m _{rv})
Mean value	3 g/m²	0,2 %
Coefficient of variation	19,0 %	19,0 %
Confidence interval (P = 95 %) absolute width	± 1 g/m ²	± 0,1 %

Tretradindex: 6,6

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):	4,0	3,0
Index of colour change (median):	4	3-4
Main reasons for change:	structure	structure
Index after colour correcture (median):	4,0	3,0
Index after colour correcture (mean):	4,2	3,2

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

Damages by the treatment: none

2.8 Determination of the resistance to fraying

Test conditions

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

Test results

Tested sample: 1

Damages on cut edge after treatment: none

Judgement

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

2.9 Determination of the basic requirement of pile carpets

Test conditions

According to EN 1307:2005

Test results

Tested sample: 1

Surface structure:

Cut pile carpet

Pile material:

100 % Polyamide

Colour fastness to

Light

Rubbing

- dry

- wet

Water – change in colour

- plain carpets

- other carpets

Water – staining ²⁾

- all carpets

Basic requirements

Test results

<p>≥ 5 (Pastel shade ≥ 4) ¹⁾</p> <p>≥ 3-4</p> <p>≥ 3</p> <p>≥ 3-4</p> <p>≥ 4</p> <p>≥ 2-3</p>	<p>The manufacturer has to guarantee the minimum values for colour fastness as stated beside for each colour.</p>
--	---

Fibre bind for all carpets < 80 % Wool

Loop pile carpets

Cut pile carpets

<p>Fuzzing below level of reference photographs</p> <p>Loss of mass ≤ 25 %</p>	<p>0,2 %</p>
--	--------------

Colour change ³⁾

Due to spilled water

Due to soiling subsequent to spilled water

<p>≥ 4</p> <p>≥ 3</p>	<p>--</p> <p>--</p>
-----------------------	---------------------

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

2) On multifibre – worst result

3) Conformity has to be declared by the manufacturer for each production run

Judgement

The tested material fulfills the basic requirements of pile carpets according to EN 1307:2005, point 6.

2.10 Classification of pile carpets

Test conditions

According to EN 1307:2005

Test results

Tested sample: 1

Surface structure		cut pile
Pile material		10 % Polyamide
Surface pile weight	[g/m ²]	1224
Surface pile thickness	[mm]	9,0
Surface pile density	[g/cm ³]	0,136
Number of tufts	[tufts/m ²]	51900
Fibre factor	[F _F]	1,0
Tretrad index	[I _{TR}]	6,6
Drum test (Vettermann)		--
Short term	[5.000 turns]	4,0
Long term	[22.000 turns]	3,0
Fraying behavior		resistance to fraying
Wear index	[W _I]	9,2
Luxury rating factor	[C _F]	59,0

Classification

Carpet category	Type 2 (thick, heavy carpets)
Classification for wear	class 33
Classification for change in appearance	class 23/32
Level of use classification	class 23/32
Luxury rating class:	LC 5

Explanations:

Textile floor coverings are classified to their suitability in different use classes. There are two essential characteristics for the classification: wear behaviour and change in appearance. These both characteristics serve the description of the use behaviour in dependence to the intensity of use. **The use class assigned to the carpet is the lower one that was reached after the testing of the wear behaviour and change in appearance.** 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	moderate / 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“	Luxury rating class	„luxury value“
EN 1307:2005	EN 1307:1997			
21	1	low	LC 1	plain
22	2	normal	LC 2	good
22+ / 31			LC 3	high
23 / 32	3	heavy	LC 4	luxurious
33	4	extreme	LC 5	prestige

2.11 Determination of electrical resistances**Test conditions**

According to ISO 10965

Test atmosphere: 23°C ± 1°C / 25% ± 3% rel. humidity

Circuit voltage: 500 V

Test results

Tested sample: 1

Sample	Measurement	Vertical resistance	Horizontal resistance
1	1	4,7 x 10 ¹¹ Ω	1,2 x 10 ¹² Ω
	2	5,8 x 10 ¹¹ Ω	1,3 x 10 ¹² Ω
2	1	1,7 x 10 ¹¹ Ω	1,1 x 10 ¹² Ω
	2	8,4 x 10 ¹¹ Ω	2,0 x 10 ¹² Ω
3	1	3,0 x 10 ¹¹ Ω	1,1 x 10 ¹² Ω
	2	8,1 x 10 ¹¹ Ω	1,6 x 10 ¹² Ω
Geometric mean value		4,6 x 10¹¹ Ω	1,3 x 10¹² Ω

2.12 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

Test results

Tested sample: 1

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

Judgement

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

2.13 Summary of Results

Article	„epoca silky wt“	
Details		
Pile material (by the applicant)	100% Polyamide	
Total mass per unit area	3047 g/m ²	
Mass of pile per unit area	1224 g/m ²	
Total thickness	11,5 mm	
Thickness of pile above the substrate	9,0 mm	
Surface pile density	0,136 g/cm ³	
Number of tufts or loops	51900 /m ²	
Mass loss		
Mass loss per unit	3 g/m ²	
Relative mass loss	0,2 %	
Tretrad-Index	6,6	
Change in appearance – drum test		
	Median	Mean value
Grade after colour correcture – 5000 cycles	grade 4,0	grade 4,2
Grade after colour correcture – 22000 cycles	grade 3,0	grade 3,2
Classification according EN 1307		
Carpet category	type 2	
Basic requirements	fulfilled	
Classification of wear	class 33	
Classification of change in appearance	class 23/32	
Level of use classification	class 23/32	
Use area	domestic use: heavy commercial use: general	
Luxury rating factor	59,0	
Luxury rating class	class LC 5	
Comfort class	prestige	
Resistance to fraying	yes	
Electrical resistance		
Vertical resistance	4,6 x 10 ¹¹ Ω	
Horizontal resistance	1,3 x 10 ¹² Ω	
Electrical propensity		
Walking test	+1,4 kV	
Classification	antistatic	

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

This issue is a rewriting of report 51725 dated 19.04.2006.

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 (bmwfw). The scope of accreditation is listed on www.bmwfw.gv.at/akkreditierung.

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.

Copyright and Usage Notes

It is pointed out, that any alterations, amendments or falsifications of reports not authorized by the issuer of the report will be prosecuted as civil and criminal offences; this especially to the appropriate requirements of ABGB, UrhG, UWG and criminal law and their respective international equivalents.

Reports are protected under international copyright laws. Written consent of the ÖTI is required for publications (also in excerpt) and reference to tests for public relation purposes. Reports may only be reproduced in full length.

End of report