



Report 67613 Test Report

Applicant

EGETAEPER A/S
Industrivej Nord 25
7400 Herning
DÄNEMARK

Reference

Mrs. Lenette Ormstrup

Application

Testing and classification according to EN 1307, determination of castor chair suitability, stair suitability and resistance to fraying and static electrical propensity.

Test Material

"Tempo 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: 13

Original Issue / Vienna 2011-12-14 / da/AM/KK 120

Authorised for Institute
DI (FH) Angelika Hönecke


.....

Technology
Ing. Judith Pointner ☎ 28 / pointner@oeti.at





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.....	4
2.6	Determination of the basic requirement of pile carpets.....	5
2.7	Determination of fibrebind of synthetic looppile carpets.....	6
2.8	Determination of the mass loss of textile floor coverings using the Lisson Tretrad machine.....	6
2.9	Determination of changes in appearance – Drum Test.....	7
2.10	Classification of pile carpets.....	8
2.11	Determination of the castor chair suitability of textile floor coverings.....	9
2.12	Assessment of static electrical propensity – walking test.....	10
2.13	Classification of the suitability for use on stairs.....	10
2.14	Determination of the resistance to fraying.....	11
2.15	Summary of Results.....	12
3	Remarks.....	13

1 Order

1.1 Chronology

<i>Date</i>	<i>Received</i>	<i>Order</i>
2011-10-04	2011-10-04	Testing and classification according to EN 1307, determination of castor chair suitability, stair suitability and resistance to fraying and static electrical propensity.

1.2 Samples

<i>No.</i>	<i>Received</i>	<i>Sample Identification</i>
1	2011-10-03 ⁽¹⁾	"Tempo wt"

(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:	tufting
Structure of face side:	loop pile
Coloration of face side:	uni
Type of backing:	textile secondary backing
Type of fibres at face side *):	100 % polyamide (according to the specification by the applicant)

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

According to EN 1307, this is a pile carpet.

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	2230 g/m²	319 g/m²
Coefficient of variation	0.2 %	0.8 %
Confidence interval (P = 95 %) absolute width	± 8 g/m ²	± 4 g/m ²

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 it 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

	total thickness	thickness of wear layer
Mean value	5.4 mm	2.8 mm
Coeffizient of variation	0.9 %	2.2 %
Confidence interval (P = 95 %) absolute width	± 0.1 mm	± 0.1 mm

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	1.14 g/cm ³
Mass of pile per unit area	319 g/m ²
Thickness of above the substrate pile	2.8 mm

Test results

Tested sample: 1

Surface pile density	0.114 g/cm ³
Relative surface pile density	10.0 %

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:	39.2
	in cross direction:	39.8
Number of tufts or loops per dm ² :		1560
Number of tufts or loops per m ² :		156000



2.6 Determination of the basic requirement of pile carpets

Test conditions

According to EN 1307:2008

Test results

Tested sample: 1

Surface structure	Loop pile
Pile material	100% polyamide

		Basic requirements	Test results
Colour fastness to a)			
♦ Light		≥ 5 (pastel shade ^{b)} ≥ 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 ^{c)}			
- - all carpets		≥ 2-3	
Fibre bind for all carpets < 80 % Wool			
♦ Loop pile carpets		Fuzzing below level of reference photographs	fulfilled
Colour change ^{d)}			
♦ Due to spilled water		≥ 4	Conformity to be declared by the manufacturer for each production run
♦ Due to soiling subsequent to spilled water		≥ 3	

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

Judgement

The tested material fulfills the basic requirements of pile carpets according to EN 1307:2008, point 6.



2.7 Determination of fibrebind of synthetic looppile carpets

Test Conditions

Testing according EN 1963, Test C
Evaluation according: EN 1307
Duration: 400 double passages

Test Results

Tested sample: 1

Assessment of appearance change: better than photostandard

Evaluation

The specimen fulfills the requirements of EN 1963 or 1307.

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: 2200
Adjustment of wheel height: --5 mm
Number of specimens: 4

Test results

Tested sample: 1

	Mass loss per unit area [m _v]	Relative mass loss [m _v]
Mean value	6 g/m²	0.5 %
Coefficient of variation	39.5 %	39.5 %
Confidence interval (P = 95 %) absolute width	± 4 g/m ²	± 0.3 %
Tretradindex:	6.4	

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 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	3.5
Index of colour change (median)	4-5	4
Main reasons for change	structure	structure
Index after colour correction (median)	4.0	3.5
Index after colour correction (mean)	4.0	3.7
Damages by the treatment	none	

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



2.10 Classification of pile carpets

Test conditions

According to EN 1307:2008

Test results

Tested sample: 1

Surface structure		loop pile
Pile material		100% polyamide
Surface pile weight	[g/m ²]	319
Surface pile thickness	[mm]	2.8
Surface pile density	[g/cm ³]	0.114
Number of tufts	[tufts/m ²]	156000
Fibre factor	[FF]	-
Tretrad index	[I _{TR}]	6.4
Drum test (Vettermann)	♦ Short term [5.000 turns]	4
	♦ Long term [22.000 turns]	3.5
Resistance to fraying		resistant to fraying
Luxury rating factor	[C _F]	6.2

Classification

Type of carpet	Type 1
Classification for wear	class 33
Classification for change in appearance	class 33
Overall use class	class 33
Luxury rating class	LC 1

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 1307:2008	EN 1307:1997			
21	1	low	LC 1	plain
22	2	normal	LC 2	good
22+ / 31				
23 / 32	3	heavy	LC 3	high
33	4	extreme	LC 4	luxurious
			LC 5	prestige

2.11 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	3	3	colour, structure
25 000 revolutions	2.5	2-3	colour, structure
Castor chair index (r)	2.9		

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

Damages by the treatment: none

Classification

According the specifications of **EN 1307** the specimen can be classified as:

"suitable for intensive use"



2.12 Assessment of static electrical propensity – walking test

Test Conditions

According to ISO 6356
Testing atmosphere: 23 °C / 25 % 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
0.2 kV	0.2 kV	0.3 kV	0.2 kV

Judgement

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

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 1307 the specimen can be classified as suitable

"for intensive 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 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: none

Judgement

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



2.15 Summary of Results

Article	"Tempo wt"
Constructive characteristics Material of use surface Total mass per unit area Mass of pile per unit area Total thickness Thickness of pile above the substrate Surface pile density Number of tufts or loops	100% polyamid 2230 g/m ² 319 g/m ² 5.4 mm 2.8 mm 0.114 g/cm ³ 156000 /m ²
Basic requirements Fibre bind - Loop-Pile Carpets Lisson Tretrad (EN 1963, method C) - appearance change	fulfilled better than photostandard
Tests for determination of use classification level Wear behaviour "Lisson-Tretrad" (EN 1963 method A) mass loss per unit area [m _v] relative mass loss [m _v] Tretradindex [I _{tr}] Change in appearance - "Vettermann" drum test (ISO 10 361) assesment after colour correction – 5000 cycles assesment after colour correction – 22000 Touren	6 g/m ² 0.5 % 6.4 Median Mean value Note 4.0 Note 4.0 Note 3.5 Note 3.7
Classification according EN 1307 Carpet category Basic requirements Classification of the wear performance Classification of the appearance retention Level of use classification Use intensity Luxury rating classification Luxury value	Type 1 fulfilled Class 33 Class 33 Class 33 domestic use 23 "heavy" commercial use 33 "heavy" LC1 LC1 "plain"
Additional characteristics Castor chair suitability (EN 985) Antistatic (ISO 6356) Walking test Suitability for use on stairs (EN 1963 method B) Fraying behaviour (EN 1814)	Suitable for intense use 0.2 kV "suitable for intensive use" resistant to fraying



3 Remarks

Validity

There are no regulations concerning validity in the appropriate single test standards. Regardless of any specified validity, this report stays valid at the most, as long as the product will be produced unchanged; this is the responsibility of the manufacturer. Possible national or international restrictions concerning the validity 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 and accreditations

This issue replaces report 67162, dated 2011-11-24.

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/hando/>). The accreditation by the Federal Ministry of Economy, Family and Youth as testing laboratory was repeated under reference 92.714/0560-I/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.

Copyright und 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.