## ÖTI – Institut für Ökologie, Technik und Innovation GmbH













# Report 75598 Test Report



## **Applicant**

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### Reference

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## **Application**

Determination according to the classification criteria of EN 1307 as well as castor chair suitability, suitability for using on stairs, resistance to fraying and static electrical propensity.

#### **Test Material**

"Highline 80/20 1900 AB"

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

Date Received Order

2015-01-26 2015-01-28 Determination according to the classification criteria of EN 1307

as well as castor chair suitability, suitability for using on stairs,

resistance to fraying and static electrical propensity.

## 1.2 Samples

No. Received Sample Identification

1 2015-01-28 (1) "Highline 80/20 1900 AB"

(1) Samples provided by the customer. (2) Sample drawn by  $\ddot{\text{O}}\text{TI}.$ 



## 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
Type of base:	Non-woven fabric
Type of backing:	Textile backing
Type of coloration / pattern:	Patterned
Type of fibres at face side *):	80 % Wool 20 % Polyamide (according to the applicant)
Dimensions:	Rolls
Type of floor covering:	Pile carpet

<sup>\*)</sup> 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 accr.)

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

Type of shearing apparature: Sharp pointed knife

Number of samples: 4

#### **Test results**

Tested sample: 1

	mass per unit area	pile mass per unit area
Mean value	3324 g/m²	1529 g/m²
Coefficient of variation	1.8 %	2.4 %
Confidence interval (P = 95 %) absolute width	± 96 g/m²	± 59 g/m²

#### 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 accr.)

Determination of thickness of wear layer according to ISO 1766 accr.)

Test atmosphere:  $20^{\circ}$  C /  $65\,\%$  rel. humidity Shearing methode: Sharp pointed knife

Number of samples: 4

#### Test results

Tested sample: 1

	total thickness	thickness of wear layer
Mean value	12.5 mm	8.9 mm
Coeffizient of variation	0.7 %	0.7 %
Confidence interval (P = 95 %) absolute width	± 0.2 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 accr.) with integration of the following test results:

Pile material	80 % Wool, 20 % Polyamide
Density of pile material	1.28 g/cm³
Mass of pile per unit area	1529 g/m²
Thickness of above the substrate pile	8.9 mm

### **Test results**

Tested sample: 1

Surface pile density	0.172 g/cm³
Relative surface pile density	13.4 %

## 2.5 Determination of number of tufts or loops

#### **Test conditions**

According to ISO 1763 accr.)

### **Test results**

Tested sample: 1

Number of tufts or loops / 10 cm in length direction:		51.3
	in cross direction:	31.9
Number of tufts or loops per dm <sup>2</sup> :		1636
Number of tufts or loops per m <sup>2</sup> :		163600



## 2.6 Determination of fibre bind using a modified martindale machine

## **Test conditions**

According to ISO 11856:2014

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

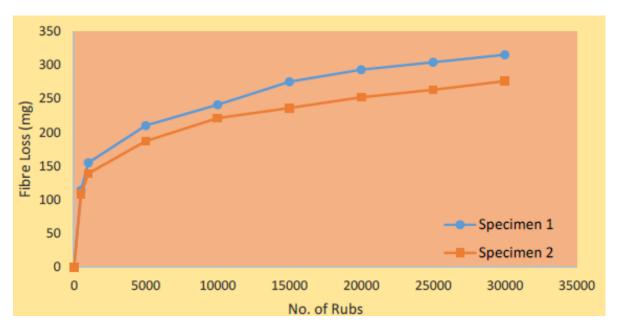
Number of samples: 4

Abrasion load: 795g (corresponds 12 kPa) Test laboratory: BTTG – 25/06426/02/15

### **Test results**

	Total weight loss [mg]		
Number of rubs	Specimen 1	Specimen 2	Mean value
500	114	108	111
1,000	155	139	147
5,000	210	187	199
10,000	241	221	231
15,000	275	236	256
20,000	293	252	273
25,000	304	263	284
30,000	315	276	296

## Fibre Shedding



	Fibre loss per rub (Between 10000 and 30000 rubs)	
Specimen 1	0.0037 mg	
Specimen 2	0.0028 mg	
Mean value	0.0033 mg	



## 2.7 Determination of the basic requirements of textile floor coverings

## **Test conditions**

According to EN 1307:2014 akkr.)

### **Test results**

Tested sample: 1

	Basic requirements	Test results
Colour fastness to a)		
• Light	≥ 5 (natural fibres ≥ 4)	
Rubbing		
- dry	≥ 3-4	
- wet	≥ 3	Conformity has to be
Water – Change in colour		declared by the manufacturer for each
- plain carpets	≥ 3-4	colour
- patterned carpets	≥ 4	
Water – staining		
- all carpets	≥ 2-3	

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

Fibre bind for carpets ≥ 80 % natural fibres		
<ul> <li>Loss of weight</li> </ul>	< 250 mg each 10 000 T	< 250 mg

## Judgement

The tested material fulfills the basic requirements of pile carpets according to EN 1307.



## 2.8 Determination of changes in appearance – Drum Test

## **Test conditions**

According to EN 1307 and ISO/TR 10 361 accr.) 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)	3.5	3.0
Index of colour change (median)	3 – 4	2
Main reasons for change	colour	colour, structure
Index after colour correction (median)	3.5	3.0
Index after colour correction (mean)	3.3	2.8
Damages by the treatment	nt none	

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



## 2.9 Classification of textile floor coverings

## **Test conditions**

According to EN 1307:2014 accr.)

#### **Test results**

Tested sample: 1

Index of appearance change according	Short time test	3.5
to ISO 10361	<ul> <li>Long time test</li> </ul>	3.0
Pile density *)		0.172 g/cm³

<sup>\*)</sup> only required for class 32 for textile floor coverings with ≥ 80% natural fibers.

### Classification

Change in apperance	Class 33
Overall use class	Class 33
Luxury rating class	LC 5

### **Explanation:**

Textile floor coverings are classified to their suitability in different use classes. The tested and mentioned characteristics used to describe the use behaviour in dependence to the intensity of use. The different use classes are described as followed:

Do	mestic	Comm	ercial
Class	Use intensity	Class	Use intensity
21	light	31	light
22	medium	32	medium
23	heavy	33	heavy

Textile floorcoverings are classified into following luxury rating classes.

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



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

#### **Test conditions**

According to EN 985, Method A accr.)

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 appear- ance change *)
5 000 revolutions	colour, structure	3	2.5
25 000 revolutions	colour, structure	1 - 2	2.0
Caratan abainin day (v)		0.4	

Castor chair index (r) 2.4

Damages by the treatment: none

### Classification

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

"suitable for intensive use"

## 2.11 Classification of the suitability for use on stairs

### **Test conditions**

According to EN 1963; Test methode B: nosing test accr.)

#### **Test results**

Tested sample: 1

Appearance change*) in the edge area	low appearance change

<sup>\*)</sup>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.

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



## 2.12 Determination of the resistance to fraying

### **Test conditions**

Testing according to EN 1814 accr.) Number of test samples: 4

Kind of test sample: Sheet materials

#### Test results

Tested sample: 1

Desciption of cut edge after treatment:

Delamination	not occured
Fraying	not occured
Tuft loss / sprouting	not occured
Thread puller	not occured
Release of fibers from the pile material	not occured
No change	accurate

## **Judgement**

The tested specimen can be classified as resistant to fraying.

## 2.13 Assessment of static electrical propensity – walking test

### **Test conditions**

According to ISO 6356 accr.)

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
+ 0.3 kV	+ 0.3 kV	+ 0.3 kV	+ 0.3 kV

### **Judgement**

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



## 2.1 Summarized test report

According to EN 1307:2014accr.), Annex B

Identification, basic information		
Productname	"Highline 80/20 1900 AB"	
Date	2015-02-25	
Manufacturer / User	EGETAEPPER A/S	
Type of face side	Cut pile (reference according to B.2.2: A1)	
Manufacturing procedure	Tufted (reference according to B.2.1: M5)	
Backing	Textile backing (reference according to B.2.4: \$10)	
Type of floor covering	Pile carpet	
Base	Non-woven fabric (reference according to B.2.3: P3)	
Colouration	Multicoloured patterned (reference according to B.2.5: C2)	
Fibres of pile	80 % Polyamide, 20 % Wool (according to the applicant)	
Total mass	3324 g/m <sup>2</sup>	
Pile mass above the substrate	1529 g/m²	
Total thickness	12.5 mm	
Pile height	8.9 mm	
Surface pile density	0.172 g/cm³	
Number of tufts or loops	1636 /dm²	
Vettermann-drum test, short time testing	3.5	
Vettermann-drum test, long time testing	3.0	
Basic requirements	fulfilled	
Use class		

Use class	
Classification of change in appearance	Class 33
Level of use classification	Class 33
Comfort-Class	LC5

Additional properties		
Castor chair suitability	suitable for intensive use	
Stair suitability	suitable for intensive use	
Body voltage from the walk test	+ 0.3 kV	
Resistance to fraying	resistant to fraying	



## 3 Remarks

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