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Test Report VN720 186907.2-2

Application

Testing and classification according to EN 1307 as well as castor chair suitability, suitability for use on stairs and resistance to fraying.

Test Material

"Highline 750 ECT350"

The test material used for testing was made anonymous for laboratory purposes.
A detailed sample list is included in the document.

Issuing

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OETI - Institut fuer Oekologie, Technik und Innovation GmbH

Günther Sereinig
Customer Service Officer

1 Application

Date of Order	Scope of Order
11.07.2021	Summarized test report - EN 1307 Annex B Description Of Specimen - Textile Floor Coverings - EN 1307 Specific requirements of tiles - EN 1307 Annex A Mass Per Unit Area - ISO 8543 Textile Floor Coverings Mass Of Pile Above Substrate - ISO 8543 Thickness Of Textile Floor Coverings - ISO 1765 Thickness Wear Layer Of Textile Floor Coverings - ISO 1766 Pile Density - ISO 8543 Number Of Tufts Or Loops - ISO 1763 Mass Loss - Lisson Pedal Wheel Methode - EN ISO 12951, Test A (EN 1963, Test A) Basic requirements - EN 1307 - Textile floor covering with cut pile Changes in Appearance - Drum Test - ISO 10361 Method A / EN ISO 9405 Classification - EN 1307 - Textile floor covering with pile Side Length, Squareness, Straightness - EN 994 - Textile Floorcoverings Total Mass Of the Single Tile – ISO 8543 Castor Chair Suitability Of Textile Floor Coverings - EN 985 Method A / ISO 9405 Suitability For Use On Stairs - EN ISO 12951, Test B (EN 1963, Test A+B) Resistance To Fraying - EN ISO 10833 Dimension Stability And Curling After Exposure To Heat And Water - ISO 2551 / EN 986

2 Samples

No.	Receipt	Sample Identification
1	15.07.2021	"Highline 750 ECT350"

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

3 Tests Performed / Results

		#1 “Highline 750 ECT350”
Summarized test report EN 1307 Annex B *		
• Identification, basic information		
Type of face side		Cut Pile (according to B.2.2: A1)
Manufacturing procedure		Tufted (according to B.2.1: M5)
Backing		Textile Backing (according to B.2.4: S10)
Type of floor covering		Pile Carpet
Base		Non-woven (according to B.2.3: P3)
Colouration		Multicolored unpatterned (according to B.2.5: C3)
Dimensions		Tiles
Fibers of pile		100% Polyamide
• Construction		
Total mass	[g/m²]	2528
Pile mass above the substrate	[g/m²]	549
Total thickness	[mm]	8.2
Thickness of pile layer	[mm]	4.3
Surface pile density	[g/cm³]	0.128
Number of tufts or loops per dm²		1855
• Appearance change		
Vettermann-drum test, short time testing		4.0
Vettermann-drum test, long time testing		3.5
• Classification according EN 1307		
Basic requirements		fullfield
Use class		33
Luxury-Class		LC 2
• Additional properties		
Castor chair suitability		suitable for intensive use
Stair suitability		suitable for intensive use
Fraying resistance		resistant to fraying
Dimensional stability (max. change)	[%]	-0.1

		#1 “Highline 750 ECT350”
Specific requirements of tiles EN 1307 Annex A *		
• Total mass of individual tile	[kg]	0.58
• Total weight per unit area	[kg/m²]	3.0
• Dimensions of tiles	[mm]	480x480
• Max. deviation from mean length	[%]	< 0,1
• Squareness and straightness	[%]	< 0,04
• Dimensional stability (max. change)	[%]	- 0,1 / + 0,1
• Distortion out of plane	[mm]	2.0
• Tile suitability		
• Damage at cut edge		no damage
• Basic requirements fullfiled for		removeable adhered an permanent adhered

		#1 “Highline 750 ECT350”
Description Of Specimen - Textile Floor Coverings EN 1307 *		
• Manufacturing procedure		Tufted
• Structure of face side		Cut pile
• Primary backing		Non-woven
• Colouration of the surface		Multi-colored pattern
• Type of backing		Textile backing (non-woven)
• Type of fibres at face side		100% Polyamide
• Dimensions		Tiles
• Description according to standard		Pile carpet according to EN 1307
Mass Per Unit Area ISO 8543 Textile Floor Coverings		
• Number of specimen		4
• Conditioning		
Temperature	[°C]	20
Air humidity	[%]	65
• Total mass		
Mean value	[g/m²]	2.528
Coefficient of variation	[%]	1.3
Confidence interval (95%) abs. width	[g/m²]	51
• Measurement uncertainty	[%]	0.15
Mass Of Pile Above Substrate ISO 8543		
• Number of specimen		4
• Conditioning		
Temperature	[°C]	20
Air humidity	[%]	65
• Mass of pile above substrate		
Mean value	[g/m²]	549
Coefficient of variation	[%]	2.9
Confidence interval (95%) abs. width	[g/m²]	25
• Measurement uncertainty	[%]	0.97
Thickness Of Textile Floor Coverings ISO 1765		
• Number of specimen		4
• Conditioning		
Temperature	[°C]	20
Air humidity	[%]	65
• Thickness		
Mean value	[mm]	8.2
Coefficient of variation	[%]	0.6
Confidence interval (95%) abs. width	[mm]	0.1
• Measurement uncertainty	[%]	0.74

		#1 “Highline 750 ECT350”
Thickness Wear Layer Of Textile Floor Coverings ISO 1766		
• Number of specimen		4
• Conditioning		
Temperature	[°C]	20
Air humidity	[%]	65.
• Shearing methode		
• Thickness of wear layer		
Mean value	[mm]	4.3
Coefficient of variation	[%]	1.1
Confidence interval (95%) abs. width	[mm]	0.1
• Measurement uncertainty	[%]	0.71
Pile Density ISO 8543		
• Pile material		100% Polyamide
• Density of pile material	[g/cm³]	1.14
• Mass of pile per unit area	[g/m²]	549
• Thickness of pile layer	[mm]	4.3
• Surface pile density	[g/cm³]	0.128
• Relative surface pile density	[%]	11.2
Number Of Tufts Or Loops ISO 1763		
• Number of specimen		4
• Number of tufts or loops / 10 cm		
Longitudinal direction		46.6
Cross direction		39.8
• Number of tufts or loops per dm²		1855
• Number of tufts or loops per m²		185500
Mass Loss - Lisson Pedal Wheel Methode EN ISO 12951, Test A (EN 1963, Test A)		
• Number of specimen		4
• Mass loss per unit area		
Mean value	[g/m²]	26
Coefficient of variation	[%]	5.6
Confidence interval (95%) abs. width	[g/m²]	2.0
• Relative mass loss		
Mean value	[%]	4.7
Coefficient of variation	[%]	5.6
Confidence interval (95%) abs. width	[%]	0.4
• Tretradindex		4.2
• Measurement uncertainty	[%]	1.33

		#1 “Highline 750 ECT350”
Basic requirements EN 1307 - Textile floor covering with cut pile *		
• Fibre bind - Cut pile - EN 1963 Methode A	[%]	4.7
• Basic requirements		fullfilled
Changes in Appearance - Drum Test ISO 10361 Method A / EN ISO 9405		
• Used scale		ISO - B
• Appearance change 5'000 cycles (if dominant: attribute)		
Assessor 1	[grade]	4.0
Assessor 2	[grade]	4.0
Assessor 3	[grade]	4.0
Median	[grade]	4.0
Mean value	[grade]	4.0
• Index of colour change 5'000 cycles		
Assessor 1	[grade]	4
Assessor 2	[grade]	4
Assessor 3	[grade]	4
Median	[grade]	4
• Appearance change 20'000 cycles (if dominant: attribute)		
Assessor 1	[grade]	3.5
Assessor 2	[grade]	3.0
Assessor 3	[grade]	3.5
Median	[grade]	3.5
Mean value	[grade]	3.5
• Index of colour change 20'000 cycles		
Assessor 1	[grade]	3
Assessor 2	[grade]	3
Assessor 3	[grade]	3-4
Median	[grade]	3
• Damages by treatment		none
Classification EN 1307 - Textile floor covering with pile *		
• Appearance change - short time test	[grade]	4.0
• Appearance change - long time test	[grade]	3.5
• Level of use classification		Class 33
• Luxury-Class		LC 2

		#1 “Highline 750 ECT350”
Side Length, Squareness, Straightness EN 994 - Textile Floorcoverings		
• Number of specimen		5
• Nominal dimension		
Length	[mm]	480
Width	[mm]	480
• Determination of dimensions length		
Mean length	[mm]	480.4
Min. average length	[mm]	480.3
Max. average length	[mm]	480.4
Diff. between the smallest and the largest average length	[mm]	0.1
Max. deviation from mean length	[%]	< 0,1
Max. deviation from nominal dimension	[%]	0.1
• Determination of dimensions width		
Mean length	[mm]	480.1
Min. average length	[mm]	480.2
Max. average length	[mm]	480.3
Diff. between the smallest and the largest average length	[mm]	0.1
Max. deviation from mean length	[%]	< 0,1
Max. deviation from nominal dimension	[%]	0.1
• Squareness and straightness		
Max. deviation	[mm]	< 0.20
Max. percentage deviation	[%]	< 0.04

		#1 “Highline 750 ECT350”
Castor Chair Suitability Of Textile Floor Coverings EN 985 Method A / ISO 9405		
Number of Tests		1
• Castors		Single swivel castor Type H
• Specimen fixation		double sided adhesive tape
• Used scale		ISO cut (ISO-B)
• Appearance change 5'000 cycles (if dominant: attribute)		
Assessor 1	[grade]	3.0
Assessor 2	[grade]	2.5
Assessor 3	[grade]	3.0
Median	[grade]	3.0
Mean value	[grade]	2.8
• Index of colour change 5'000 cycles		
Assessor 1	[grade]	4.0
Assessor 2	[grade]	4.0
Assessor 3	[grade]	4.0
Median	[grade]	4.0
• Appearance change 25'000 cycles (if dominant: attribute)		
Assessor 1	[grade]	2.0
Assessor 2	[grade]	2.0
Assessor 3	[grade]	2.0
Median	[grade]	2.0
Mean value	[grade]	2.0
• Index of colour change 25'000 cycles		
Assessor 1	[grade]	4
Assessor 2	[grade]	3-4
Assessor 3	[grade]	3-4
Median	[grade]	3-4
• Damages by treatment		none
• Castor chair index		2.8
• Castor chair suitability		suitable for intensive use
Suitability For Use On Stairs EN ISO 12951, Test B (EN 1963, Test A+B) *		
• Number of specimen		4
• Median of appearance change in the edge area	[grade]	low
• Assessment		suitable for intensive use
Resistance To Fraying EN ISO 10833		
• Number of specimen		4
• Kind of test sample		Tiles
• Unnacceptable changes		
Specimen 1		not occured
Specimen 2		not occured
Specimen 3		not occured
Specimen 4		not occured
• Assessment		resistant to fraying

		#1 “Highline 750 ECT350”
Dimension Stability And Curling After Exposure To Heat And Water ISO 2551 / EN 986		
• Number of specimen		3
• Deviation from standard		None
• 1. Treatment - 2 hours storage (drying) at 60°C		
1. Measurement length direction	[%]	- 0.1
2. Measurement length direction	[%]	- 0.1
3. Measurement length direction	[%]	- 0.1
Mean value length direction	[%]	- 0.1
1. Measurement cross direction	[%]	± 0.0
2. Measurement cross direction	[%]	± 0.0
3. Measurement cross direction	[%]	- 0.1
Mean value cross direction	[%]	± 0.0
• 2. Treatment - 2 hours storage in water at 20°C		
1. Measurement length direction	[%]	± 0.0
2. Measurement length direction	[%]	± 0.0
3. Measurement length direction	[%]	+ 0.1
Mean value length direction	[%]	± 0.0
1. Measurement cross direction	[%]	+ 0.1
2. Measurement cross direction	[%]	+ 0.1
3. Measurement cross direction	[%]	+ 0.1
Mean value cross direction	[%]	+ 0.1
• 3. Treatment - 24 hours storage (drying) at 60°C		
1. Measurement length direction	[%]	- 0.1
2. Measurement length direction	[%]	- 0.1
3. Measurement length direction	[%]	- 0.1
Mean value length direction	[%]	- 0.1
1. Measurement cross direction	[%]	+ 0.1
2. Measurement cross direction	[%]	± 0.0
3. Measurement cross direction	[%]	± 0.0
Mean value cross direction	[%]	± 0.0
• 4. Treatment - 48 hours storage at standard atmosphere		
1. Measurement length direction	[%]	- 0.1
2. Measurement length direction	[%]	- 0.1
3. Measurement length direction	[%]	- 0.1
Mean value length direction	[%]	- 0.1
1. Measurement cross direction	[%]	± 0.0
2. Measurement cross direction	[%]	± 0.0
3. Measurement cross direction	[%]	± 0.0
Mean value cross direction	[%]	± 0.0
• Vertical distortion out of plane	[mm]	2.0
• **Description of the final appearance**		**low bowl**
• Measurement uncertainty	[%]	14.49

4 Remarks

Period of 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 OETI. 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 is 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. The testing period is defined as timeframe between receipt of samples and issue date of test report. Without explicit written other agreement testing is destructive and the sample material is transferred to the property of OETI, which is entitled to freely decide on storage and disposal.

Issuing

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Quality Management, Accreditation And Notification

This issue is a rewriting of report 186907.2-1 dated 23.09.2021. The accreditation marking is valid for the date of the original copy. All tests and services are performed under a quality management system according to EN ISO/IEC 17025. OETI is accredited as Testing Laboratory and Certification Body for products. It also is a Notified Body (NB0534). (see http://ec.europa.eu/enterprise/newapproach/nando/). Accreditation was provided by Akkreditierung Austria. The scope of accreditation is listed on www.oeti.biz. Due to the system for the mutual recognition of national accreditations (ILAC/IAF), this accreditation is valid worldwide.

Statements of conformity are based on the specifications of the specified standard. The “simple acceptance rule” applies, that means the measurement uncertainty is stated for the statement of conformity, but not taken into account.

In this report individual non-accredited test procedures are marked with *. Nevertheless, the analysis was also carried out for these parameters at the same level of quality as for the accredited parameters.

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