



Report VN720 144698.2 Test Report

Applicant

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Reference

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Application

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

Test material

„Una Mineral ECT350“

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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Authorised for Institute
Ing. Hannes Vittek

A handwritten signature in blue ink, appearing to read 'Vitte', positioned above a horizontal dotted line.

Contents

1 Order 2
 1.1 Chronology 2
 1.2 Samples 2
 2 Findings / Tests performed 3
 2.1 Summarized test report 3
 3 Remarks 12

1 Order

1.1 Chronology

Date	Received	Order
26.09.2018	28.09.2018	Testing and classification according to EN 1307 as well as castor chair suitability, suitability for use on stairs, resistance to fraying, antistatic behaviour and horizontal and vertical resistance.

1.2 Samples

Nr.	Received	Sample Identification
1	28.09.2018	„Una Mineral ECT350“

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

2 Findings / Tests performed

2.1 Summarized test report

According to EN 1307 Annex B

Identification, basic information	
Productname	“Una Mineral ECT350”
Date	05.11.2018
Manufacturer / User	EGETAEPPEL A/S
Type of face side	Loop pile (reference according to B.2.2: A4)
Primary backing	non-woven (reference according to B.2.3: P3)
Manufacturing procedure	Tufted (reference according to B.2.1: M5)
Backing	Textile backing (non-woven) (reference according to B.2.4: S10)
Type of floor covering	Pile carpet
Colouration	Multicoloured unpatterned (reference according to B.2.5: C3)
Dimensions	Tiles
Fibres of pile	100% Polyamide (according to the applicant)
Total mass	2732 g/m ²
Pile mass above the substrate	333 g/m ²
Total thickness	6,5 mm
Pile height	2,7 mm
Surface pile density	0,123 g/cm ³
Number of tufts or loops	1670 /dm ²
Vettermann-drum test, short time testing	4,5
Vettermann-drum test, long time testing	4,0
Basic requirements	fulfilled
Use class	
Classification of change in appearance	Class 33
Level of use classification	Class 33
Comfort-Class	LC1
Additional properties	
Castor chair suitability	suitable for intensive use
Stair suitability	suitable for intensive use
Fraying resistance	resistant to fraying
Body voltage, walking test	-1,3 kV
Classification according to EN 14041	antistatic
Vertical resistance	8,6 x 10 ¹¹
Horizontal resistance	1,1 x 10 ¹¹
Dimensional stability (max. deviation)	-0,4 %

Requirements for tiles	
Total mass of each tile	0,645 kg
Total weight per unit area	2,732 kg/m ²
Dimensions of tiles	480 x 480 mm
Squareness and straightness	< 0,04 %
Dimensional stability	-0,4 %
Distortion out of plane (max. deviation)	5,0 mm
Damages on cut edge	no damage
Tile suitability	permanent adhered

DESCRIPTION OF SPECIMEN textile floor coverings EN 1307	
Number of specimen	1
Manufacturing procedure	tufted
Primary backing	non-woven
Base structure of face side	loop pile
Coloration of face side	multicolored unpatterned
Type of backing	textile backing (non-woven)
Type of fibres at face side	100% Polyamide
Description according to standard	Pile carpet
MASS PER UNIT AREA of textile floor coverings ISO 8543	
Number of specimen	4
Climatisation	
- Temperature [°C]	20
- Rel. air humidity [%]	65
Mass per unit area	
- Mean value [g/m ²]	2732
- Coefficient of variation [%]	0,9
- Confidence interval (P = 95 %) abs. width [g/m ²]	40
MASS PER UNIT AREA of textile floor coverings ISO 8543	
Number of specimen	4
Climatisation	
- Temperature [°C]	20
- Rel. air humidity [%]	65
Pile mass per unit area	
- Mean value [g/m ²]	333
- Coefficient of variation [%]	3,1
- Confidence interval (P = 95 %) abs. width [g/m ²]	17
THICKNESS of textile floor coverings ISO 1765	
Number of specimen	4
Climatisation	
- Temperature [°C]	20
- Air humidity [%]	65
Thickness	
- Mean value [mm]	6,5
- Coefficient of variation [%]	0,2
- Confidence interval (P = 95 %) abs. width [mm]	0,1
THICKNESS WEAR LAYER of textile floor coverings ISO 1766	
Number of specimen	4
Test atmosphere	
- Temperature [°C]	20
- Air humidity [%]	65
Shearing methode	Sharp pointed knife
Thickness of wear layer	
- Mean value [mm]	2,7
- Coefficient of variation [%]	0,4
- Confidence interval (P = 95 %) abs. width [mm]	0,1

PILE DENSITY ISO 8543 Number of specimen Pile material Density of pile material [g/cm ³] Mass of pile per unit area [g/cm ²] Thickness of above the substrate pile [mm] Surface pile density [g/cm ²] Relative surface pile density [%]	 4 100% Polyamide 1,14 333 2,7 0,123 10,8
NUMBER OF TUFTS OR LOOPS ISO 1763 Number of specimen Number of tufts or loops / 10 cm - in length direction - in cross direction Number of tufts or loops per dm ² Number of tufts or loops per m ²	 4 32,8 50,9 1670 167000
FIBREBIND EN 1963 C Number of specimen Duration [turns] Appearance change compared to photostandard	 4 400 better
BASIC REQUIREMENTS of textile floor coverings EN 1307 Basic requirements - Floor covering with Pile (Loop pile) Colour fastness Fibre bind < 80 % natural fibres Loop pile - Fuzzing Judgement Basic requirements	 1 Conformity has to be declared by the manufacturer for each colour better than photographs fulfilled

<p>CHANGES IN APPEARANCE - drum test ISO 10361</p> <p>Number of specimen Used scale Number of revolutions After 5 000 revolutions - Index of appearance change (Median) - Index of colour change (Median) - Main reasons for change - Index after colour correction (Mean value) After 20 000 revolutions - Index of appearance change (Median) - Index of colour change (Median) - Main reasons for change - Index after colour correction (Mean value) Damages by the treatment</p>	<p>2 ISO loop (ISO – A)</p> <p>4,5 4-5 -- 4,3</p> <p>4,0 4 -- 3,8 none</p>
<p>CLASSIFICATION of textile floor coverings EN 1307</p> <p>Classification of pile floor coverings Index of appearance change - Short time test - Long time test Classification of change in appearance Classification of overall use class Classification of luxury rating class</p>	<p>1</p> <p>4,5 4,0 33 33 LC1</p>
<p>MASS PER UNIT AREA of textile floor coverings ISO 8543</p> <p>Number of specimen Climatisation - Temperature [°C] - Rel. air humidity [%] Total mass of individual tile - Mean value [kg] - Coefficient of variation [%] - Confidence interval (P = 95 %) abs. width [kg]</p>	<p>4</p> <p>20 65</p> <p>0,645 1,6 0,016</p>

SIDE LENGTH, SQUARENESS, STRAIGHTNESS EN 994		
carpet tiles		
Number of specimen		5
Nominal dimension		
- Length	[mm]	480
- Width	[mm]	480
Determination of dimensions - length		
- Mean length	[mm]	480,2
- Min. average length	[mm]	480,1
- Max. average length	[mm]	480,3
- Difference between the smallest and the largest average length	[mm]	0,2
- Max. deviation from mean length	[%]	< 0,1
- Max. deviation from nominal dimension	[%]	0,1
Determination of dimensions - width		
- Mean length	[mm]	480,2
- Min. average length	[mm]	480,1
- Max. average length	[mm]	480,3
- Difference between the smallest and the largest average length	[mm]	0,2
- Max. deviation from mean length	[%]	< 0,1
- Max. deviation from nominal dimension	[%]	0,1
Squareness and straightness		
- Max. deviation	[mm]	< 0,20
- Max. deviation	[%]	< 0,04

DIMENSIONAL CHANGES AND DISTORTION OUT OF PLANE EN 986		
Number of specimen		3
1. Treatment		
- Measurement 1 - length	[%]	-0,2
- Measurement 2 - length	[%]	-0,2
- Measurement 3 - length	[%]	-0,2
- Mean value - length	[%]	-0,2
- Measurement 1 - cross	[%]	±0,0
- Measurement 2 - cross	[%]	±0,0
- Measurement 3 - cross	[%]	±0,0
- Mean value - cross	[%]	±0,0
2. Treatment		
- Measurement 1 - length	[%]	±0,0
- Measurement 2 - length	[%]	±0,0
- Measurement 3 - length	[%]	-0,1
- Mean value - length	[%]	±0,0
- Measurement 1 - cross	[%]	±0,0
- Measurement 2 - cross	[%]	±0,0
- Measurement 3 - cross	[%]	±0,0
- Mean value - cross	[%]	±0,0
3. Treatment		
- Measurement 1 - length	[%]	-0,4
- Measurement 2 - length	[%]	-0,4
- Measurement 3 - length	[%]	-0,4
- Mean value - length	[%]	-0,4
- Measurement 1 - cross	[%]	-0,1
- Measurement 2 - cross	[%]	-0,1
- Measurement 3 - cross	[%]	-0,1
- Mean value - cross	[%]	-0,1
4. Treatment		
- Measurement 1 - length	[%]	-0,3
- Measurement 2 - length	[%]	-0,3
- Measurement 3 - length	[%]	-0,3
- Mean value - length	[%]	-0,3
- Measurement 1 - cross	[%]	±0,0
- Measurement 2 - cross	[%]	±0,0
- Measurement 3 - cross	[%]	-0,1
- Mean value - cross	[%]	±0,0
Maximum disortion out of plane after treatment		
- Specimen 1	[mm]	4
- Specimen 2	[mm]	3
- Specimen 3	[mm]	5
Description of the final appearance		medium curling

<p>RESISTANCE TO FRAYING EN 1814</p> <p>Number of specimen Kind of test sample Description of cut edge after treatment - Delamination - Fraying - Tuft loss / sprouting - Thread puller - Release of fibers from the pile material Judgement</p>	<p>4 Sheets material</p> <p>not occurred not occurred not occurred not occurred not occurred</p> <p>resistant to fraying</p>
<p>CASTOR CHAIR SUITABILITY of textile floor coverings EN 985 A, Assesment EN ISO 9405</p> <p>Number of specimen Mounting of specimen Usend scale Castors Test duration 5000 revolutions Change of attribute [Grade] Index of colour change [Grade] Index of appearance change [Grade] Test duration 25000 revolutions Change of attribute [Grade] Index of colour change [Grade] Index of appearance change [Grade] Castor chair index Damages by the treatment Suitable for castor chairs</p>	<p>2 double sided adhesive tape ISO loop (ISO – A) single wheels, type H</p> <p>-- 4,0 4</p> <p>-- 3,5 3-4 3,1 none</p> <p>suitable for intensive use</p>
<p>SUITABILITY FOR USE ON STAIRS EN 1963 B</p> <p>Number of specimen Median of appearance change in the edge area [Grade] Judgement</p>	<p>4 low appearance change suitable for intensive use</p>
<p>STATIC ELECTRICAL PROPENSITY - Walking test ISO 6356</p> <p>Number of specimen Testing climate - Temperature [°C] - Air humidity [%] Base plate Sole-material Pretreatment Body-Voltage - supplied condition - Test 1 [kV] - Test 2 [kV] - Test 3 [kV] - Mean value [kV] Judgement</p>	<p>1</p> <p>23 25</p> <p>Isolating rubbermat on metal plate XS-664P Neolite none</p> <p>-1,5 -1,4 -1,0 -1,3</p> <p>antistatic</p>

ELECTRICAL RESISTANCES of textile floor coverings ISO 10965		
Number of specimen		3
Testing climate		
- Temperature	[°C]	23
- Air humidity	[%]	25
Measuring voltage		500
Horizontal resistance		
- Specimen 1 - 1st measurement	[Ohm]	$3,4 \times 10^{11}$
- Specimen 1 - 2nd measurement	[Ohm]	$4,8 \times 10^{11}$
- Specimen 2 - 1st measurement	[Ohm]	$6,5 \times 10^{11}$
- Specimen 2 - 2nd measurement	[Ohm]	$1,2 \times 10^{12}$
- Specimen 3 - 1st measurement	[Ohm]	$2,0 \times 10^{12}$
- Specimen 3 - 2nd measurement	[Ohm]	$1,6 \times 10^{12}$
- Geom. Mean value	[Ohm]	$8,6 \times 10^{11}$
ELECTRICAL RESISTANCES of textile floor coverings ISO 10965		
Number of specimen		3
Testing climate		
- Temperature	[°C]	23
- Air humidity	[%]	25
Measuring voltage		500
Vertical resistance		
- Specimen 1 - 1st measurement	[Ohm]	$9,0 \times 10^{10}$
- Specimen 1 - 2nd measurement	[Ohm]	$1,0 \times 10^{11}$
- Specimen 2 - 1st measurement	[Ohm]	$9,0 \times 10^{10}$
- Specimen 2 - 2nd measurement	[Ohm]	$1,1 \times 10^{11}$
- Specimen 3 - 1st measurement	[Ohm]	$1,6 \times 10^{11}$
- Specimen 3 - 2nd measurement	[Ohm]	$1,3 \times 10^{11}$
- Geom. Mean value	[Ohm]	$1,1 \times 10^{11}$

3 Remarks

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