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## Test Report VN720 175339.1

### Application

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

### Test Material

"ReForm Calico ECT350 / highline loop ECT350"

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

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## 1 Application

Date of Order	Scope of Order
07.10.2020	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 Total Mass Of The Single Tile - 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 Fibrebind - EN ISO 12951, Test C (EN 1963, Test C) Basic requirements - EN 1307 - Textile floor covering with loop 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 Resistance To Fraying - EN ISO 10833 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 B) Static Electrical Propensity - Walking Test - ISO 6356 Dimension Stability And Curling After Exposure To Heat And Water - ISO 2551 / EN 986

## 2 Samples

No.	Receipt	Sample Identification
1	13.10.2020	"ReForm Calico ECT350 / highline loop ECT350"

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

## 3 Preliminary note

There are different trade names for one and the same product.

#### 4 Tests Performed / Results

##### #1 "ReForm Calico ECT350 / highline loop ECT350"

Summarized test report EN 1307 Annex B		
• Identification, basic information		
Product name		"ReForm Calico ECT350 / highline loop ECT350"
Type of face side		Loop Pile (according to B.2.2: A4)
Manufacturing procedure		Tufted (according to B.2.1: M5)
Backing		Textile Backing non-woven (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/m <sup>2</sup> ]	2'893
Pile mass above the substrate	[g/m <sup>2</sup> ]	444
Total thickness	[mm]	8.0
Thickness of pile layer	[mm]	4.0
Surface pile density	[g/cm <sup>3</sup> ]	0.111
Number of tufts or loops per dm <sup>2</sup>		1'525
• Appearance change		
Vettermann-drum test, short time testing		4.5
Vettermann-drum test, long time testing		4.0
• Classification according EN 1307		
Basic requirements		fulfilled
Change in appearance		
Use class		Class 33
Luxury-Class		Class 33
• Additional properties		
Castor chair suitability		suitable for intensive use
Stair suitability		suitable for intensive use
Fraying resistance		resistant to fraying
Body-Voltage, walking test	[kV]	-1.5
Assessment according to EN 14041:2007		antistatic
Dimensional stability (max. change)	[%]	+0.1

**#1 "ReForm Calico ECT350 / highline loop ECT350"**

<b>Specific requirements of tiles</b>		
EN 1307 Annex A		
• Total mass of individual tile	[kg]	0.645
• Total weight per unit area	[kg/m <sup>2</sup> ]	2.893
• Dimensions of tiles	[mm]	480
• 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
• Tile suitability		
• Damage at cut edge		no damage
• Basic requirements fulfilled for		removeable adhered and permanent adhered

#1 "ReForm Calico ECT350 / highline loop ECT350"

<p><b>Description Of Specimen - Textile Floor Coverings</b> EN 1307</p> <ul style="list-style-type: none"> <li>• Manufacturing procedure</li> <li>• Structure of face side</li> <li>• Primary backing</li> <li>• Colouration of the surface</li> <li>• Type of backing</li> <li>• Type of fibres at face side</li> <li>• Dimensions</li> <li>• Description according to standard</li> </ul>	<p style="text-align: center;">Tufted Loop pile Non-woven Multicolored unpatterned Textile Backing 100% Polyamide Tiles Pile carpet according to EN 1307</p>
<p><b>Mass Per Unit Area</b> ISO 8543 Textile Floor Coverings</p> <ul style="list-style-type: none"> <li>• Number of specimen</li> <li>• Conditioning <ul style="list-style-type: none"> <li>Temperature [°C]</li> <li>Air humidity [%]</li> </ul> </li> <li>• Total mass <ul style="list-style-type: none"> <li>Mean value [g/m<sup>2</sup>]</li> <li>Coefficient of variation [%]</li> <li>Confidence interval (95%) abs. width [g/m<sup>2</sup>]</li> </ul> </li> </ul>	<p style="text-align: center;">4  20 65  2'893 1.1 53</p>
<p><b>Thickness Of Textile Floor Coverings</b> ISO 1765</p> <ul style="list-style-type: none"> <li>• Number of specimen</li> <li>• Conditioning <ul style="list-style-type: none"> <li>Temperature [°C]</li> <li>Air humidity [%]</li> </ul> </li> <li>• Thickness <ul style="list-style-type: none"> <li>Mean value [mm]</li> <li>Coefficient of variation [%]</li> <li>Confidence interval (95%) abs. width [mm]</li> </ul> </li> </ul>	<p style="text-align: center;">4  20 65  8.0 0.2 0.1</p>
<p><b>Thickness Wear Layer Of Textile Floor Coverings</b> ISO 1766</p> <ul style="list-style-type: none"> <li>• Number of specimen</li> <li>• Conditioning <ul style="list-style-type: none"> <li>Temperature [°C]</li> <li>Air humidity [%]</li> </ul> </li> <li>• Thickness of wear layer <ul style="list-style-type: none"> <li>Mean value [mm]</li> <li>Coefficient of variation [%]</li> <li>Confidence interval (95%) abs. width [mm]</li> </ul> </li> </ul>	<p style="text-align: center;">4  20 65  4.0 0.4 0.1</p>

**#1 "ReForm Calico ECT350 / highline loop ECT350"**

<p><b>Pile Density</b> ISO 8543</p> <ul style="list-style-type: none"> <li>• Pile material</li> <li>• Density of pile material [g/cm<sup>3</sup>]</li> <li>• Mass of pile per unit area [g/m<sup>2</sup>]</li> <li>• Thickness of pile layer [mm]</li> <li>• Surface pile density [g/cm<sup>3</sup>]</li> <li>• Relative surface pile density [%]</li> </ul>	<p>100% Polyamide</p> <p>1.14</p> <p>444</p> <p>4.0</p> <p>0.111</p> <p>9.7</p>
<p><b>Number Of Tufts Or Loops</b> ISO 1763</p> <ul style="list-style-type: none"> <li>• Number of specimen</li> <li>• Number of tufts or loops / 10 cm <ul style="list-style-type: none"> <li>Longitudinal direction</li> <li>Cross direction</li> </ul> </li> <li>• Number of tufts or loops per dm<sup>2</sup></li> <li>• Number of tufts or loops per m<sup>2</sup></li> </ul>	<p>4</p> <p>38.5</p> <p>39.6</p> <p>1'525</p> <p>152'500</p>
<p><b>Fibrebind</b> EN ISO 12951, Test C (EN 1963, Test C)</p> <ul style="list-style-type: none"> <li>• Number of specimen</li> <li>• Duration [double cycles]</li> <li>• Appearance change compared to photostandard</li> </ul>	<p>4</p> <p>400</p> <p>Better</p>
<p><b>Basic requirements</b> EN 1307 - Textile floor covering with loop pile</p> <ul style="list-style-type: none"> <li>• Fibre bind - Loop pile - EN 1963 Methode C</li> <li>• Basic requirements</li> </ul>	<p>better</p> <p>fulfilled</p>

#1 "ReForm Calico ECT350 / highline loop ECT350"

<b>Changes in Appearance - Drum Test</b> ISO 10361 Method A / EN ISO 9405		
• Used scale		ISO-A
• Appearance change 5'000 cycles (if dominant: attribute)		
Assessor 1	[grade]	4.5
Assessor 2	[grade]	4.0
Assessor 3	[grade]	4.5
Median	[grade]	4.5
Mean value	[grade]	4.3
• Index of colour change 5'000 cycles		
Assessor 1	[grade]	4-5
Assessor 2	[grade]	4-5
Assessor 3	[grade]	4-5
Median	[grade]	4-5
• Appearance change 20'000 cycles (if dominant: attribute)		
Assessor 1	[grade]	4.0
Assessor 2	[grade]	3.5
Assessor 3	[grade]	4.0
Median	[grade]	4.0
Mean value	[grade]	3.8
• Index of colour change 20'000 cycles		
Assessor 1	[grade]	4
Assessor 2	[grade]	4-5
Assessor 3	[grade]	4
Median	[grade]	4
• Damages by treatment		none
<b>Classification</b> EN 1307 - Textile floor covering with pile		
• Appearance change - short time test	[grade]	4.5
• Appearance change - long time test	[grade]	4.0
• Level of use classification		33
• Luxury-Class		LC2

#1 "ReForm Calico ECT350 / highline loop ECT350"

<b>Side Length, Squareness, Straightness</b> EN 994 - Textile Floorcoverings		
• 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]	480.2
Diff. between the smallest and the largest average length	[mm]	0.1
Max. deviation from mean length	[%]	< 0,1
Max. deviation from nominal dimension	[%]	0.0
• Determination of dimensions width		
Mean length	[mm]	480.1
Min. average length	[mm]	480.1
Max. average length	[mm]	480.2
Diff. between the smallest and the largest average length	[mm]	0.1
Max. deviation from mean length	[%]	< 0,1
Max. deviation from nominal dimension	[%]	0.0
• Squareness and straightness		
Max. deviation	[mm]	< 0.20
Max. percentage deviation	[%]	< 0.04
<b>Resistance To Fraying</b> EN ISO 10833		
• Number of specimen		4
• Kind of test sample		Tiles
• Unacceptable changes		
Specimen 1		not occurred
Specimen 2		not occurred
Specimen 3		not occurred
Specimen 4		not occurred
• Assessment		resistant to fraying
<b>Total Mass Of The Single Tile</b> ISO 8543		
• Number of specimen		4
• Conditioning		
Temperature	[°C]	20
Air humidity	[%]	65
• Total mass of tiles		
Mean value	[kg]	0.645
Coefficient of variation	[%]	1.6
Confidence interval (95%) abs. width	[kg]	0.016



#1 "ReForm Calico ECT350 / highline loop ECT350"

<p><b>Castor Chair Suitability Of Textile Floor Coverings</b> EN 985 Method A / ISO 9405</p> <ul style="list-style-type: none"> <li>• Castors</li> <li>• Specimen fixation</li> <li>• Used scale</li> <li>• Appearance change 5'000 cycles (if dominant: attribute) <ul style="list-style-type: none"> <li>Assessor 1 [grade]</li> <li>Assessor 2 [grade]</li> <li>Assessor 3 [grade]</li> <li>Median [grade]</li> <li>Mean value [grade]</li> </ul> </li> <li>• Index of colour change 5'000 cycles <ul style="list-style-type: none"> <li>Assessor 1 [grade]</li> <li>Assessor 2 [grade]</li> <li>Assessor 3 [grade]</li> <li>Median [grade]</li> </ul> </li> <li>• Appearance change 25'000 cycles (if dominant: attribute) <ul style="list-style-type: none"> <li>Assessor 1 [grade]</li> <li>Assessor 2 [grade]</li> <li>Assessor 3 [grade]</li> <li>Median [grade]</li> <li>Mean value [grade]</li> </ul> </li> <li>• Index of colour change 25'000 cycles <ul style="list-style-type: none"> <li>Assessor 1 [grade]</li> <li>Assessor 2 [grade]</li> <li>Assessor 3 [grade]</li> <li>Median [grade]</li> </ul> </li> <li>• Damages by treatment</li> <li>• Castor chair index</li> <li>• Castor chair suitability</li> </ul>	<p style="text-align: center;">Type H double sided adhesive tape ISO-A</p> <p style="text-align: center;">3.0 3.0 3.0 3.0 3.0 3-4 4 3-4 3-4 2.0 2.0 2.0 2.0 2.0 2-3 3 2-3 2-3 none 2.8 suitable for intensive use</p>
<p><b>Suitability For Use On Stairs</b> EN ISO 12951, Test B (EN 1963, Test B)</p> <ul style="list-style-type: none"> <li>• Number of specimen</li> <li>• Median of appearance change in the edge area [grade]</li> <li>• Assessment</li> </ul>	<p style="text-align: center;">4 low suitable for intensive use</p>

**#1 "ReForm Calico ECT350 / highline loop ECT350"**

<b>Static Electrical Propensity - Walking Test</b>		
ISO 6356		
• Testing climate		
Temperature	[°C]	23
Air humidity	[%]	25
• Underlay		
insulating rubber mat		
• Sole-material		
XS-664P Neolite		
• Pretreatment		
none		
• Body-Voltage supplied condition		
1. Measurement	[kV]	- 1.6
2. Measurement	[kV]	- 1.3
3. Measurement	[kV]	- 1.6
Mean value	[kV]	- 1.5
• Assessment according to EN 14041:2007		
antistatic		

#1 "ReForm Calico ECT350 / highline loop ECT350"

<b>Dimension Stability And Curling After Exposure To Heat And Water</b>		
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	[%]	± 0.0
Mean value cross direction	[%]	± 0.0
• 2. Treatment - 2 hours storage in water at 20°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	[%]	+ 0.1
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	[%]	± 0.0
3. Measurement length direction	[%]	- 0.1
Mean value length direction	[%]	- 0.1
1. Measurement cross direction	[%]	+ 0.1
2. Measurement cross direction	[%]	+ 0.1
3. Measurement cross direction	[%]	± 0.0
Mean value cross direction	[%]	+ 0.1
• 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
• Description of the final appearance		slight curling

## 5 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.

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