DLAB
TEXTILE LABORATORY

Investigation report

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Date: 26.11.2018

Investigation report No. 18-E-624

order description: **Abrasion resistance DIN EN ISO 12947-2 (2017-03) according to Martindale method (specimen breakdown); Determination of fabric propensity to surface fuzzing and to pilling - Part 2: Modified Martindale method ISO 12945 (2000-11) in accordance to DIN EN 14465 (2006-09); Seam slippage resistance DIN EN ISO 13936-2 (2004-07) method B**

sample:	600167 Proof 2766
sampling:	by orderer
orderer:	see address
date of order:	21.09.2018
date of delivery:	22.10.2018
date of testing:	21.11.2018
number of pages:	4

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Instructions for performing

1. **Method:** **Abrasion resistance DIN EN ISO 12947-2 (2017-03) according to Martindale method (specimen breakdown) in accordance to DIN EN 14465 (2006-09)**

2. **Measuring conditions**

tester:	Martindale – abrasion tester
abrasive:	wool fabric
nominal pressure:	12 kPa
scrubbing:	795 +/- 7 g
room temperature:	20 +/- 2 °C
humidity:	65 +/- 4 %
number of observers:	2
observation technology:	8-magnification

Test results

Article: **600167 Proof 2766**

weight:	452 g/m²
sample condition:	new
foam:	yes
pretreatment:	no

	Number of Cycles	Mark
	Change of colour after 3000 cycles	**3-4**
Sample 1	80.000	
Sample 2	80.000	
Sample 3	80.000	
Sample 4	80.000	
result	**80.000**	

* Final grading refers to change of colour under use of greyscale according to ISO 105-A02.
Mark 10 strong change of colour, Mark 5 = no change of colour.

Remark: According to DIN EN 14465 (2006-09) the article, in reference to abrasion resistance in furnishing fabrics, the article is ranked within **category A.**

on customer request , broken off after 80.000 cycles.

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Instructions for performing

3. **Method: Determination of fabric propensity to surface fuzzing and to pilling - Part 2:Modified Martindale method ISO 12945 (2000-11) in accordance to DIN EN 14465 (2006-09)**

4. **Measuring conditions**

tester:	Martindale-tester
abrasive:	wool-abrasive
pressure weight:	415 +/- 1 g
Test temperature:	20 +/- 2 °C
Test humidity:	65 +/- 4 %
Number of specimen:	3
Number of observers:	2
pretreatment:	No

Test results

Article: **600167 Proof 2766**

Number of cycles	Mark*
500	**4-5**
1.000	**4-5**
2.000	**4**
5.000	**4**

Remark: According to to DIN EN 14465 (2006-09) in reference to pilling tendencies of furnishing fabrics, the article is ranked within **category B.**

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Instructions for performing

5. **Method: Seam slippage resistance DIN EN ISO 13936-2 (2004-07) method B**

6. **Measuring conditions:**

Type: furnishing fabric
Tensile force: 180 N

Test results

Article: 600167 Proof 2766

	Seam opening [mm]
Warp direction (seamline weft direction)	2,2
Weft direction (seamline warp direction)	4,3

i. A. Detlef von Seyfried
Labor/Laboratory
DELCOTEX Delius Techtex GmbH & Co. KG
Only the information contained in the signed test report is binding.

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Appendix

Article: **600167 Proof 2766**

Method: **Abrasion resistance DIN EN ISO 12947-2 (2017-03) according to Martindale method (specimen breakdown) in accordance to DIN EN 14465 (2006-09)**

Original

Sample 1
80.000 **Cycles**

Sample 2
80.000 **Cycles**

COC after 3000 cycles 3-4

Sample 3
80.000 **Cycles**

Sample 4
80.000 **Cycles**

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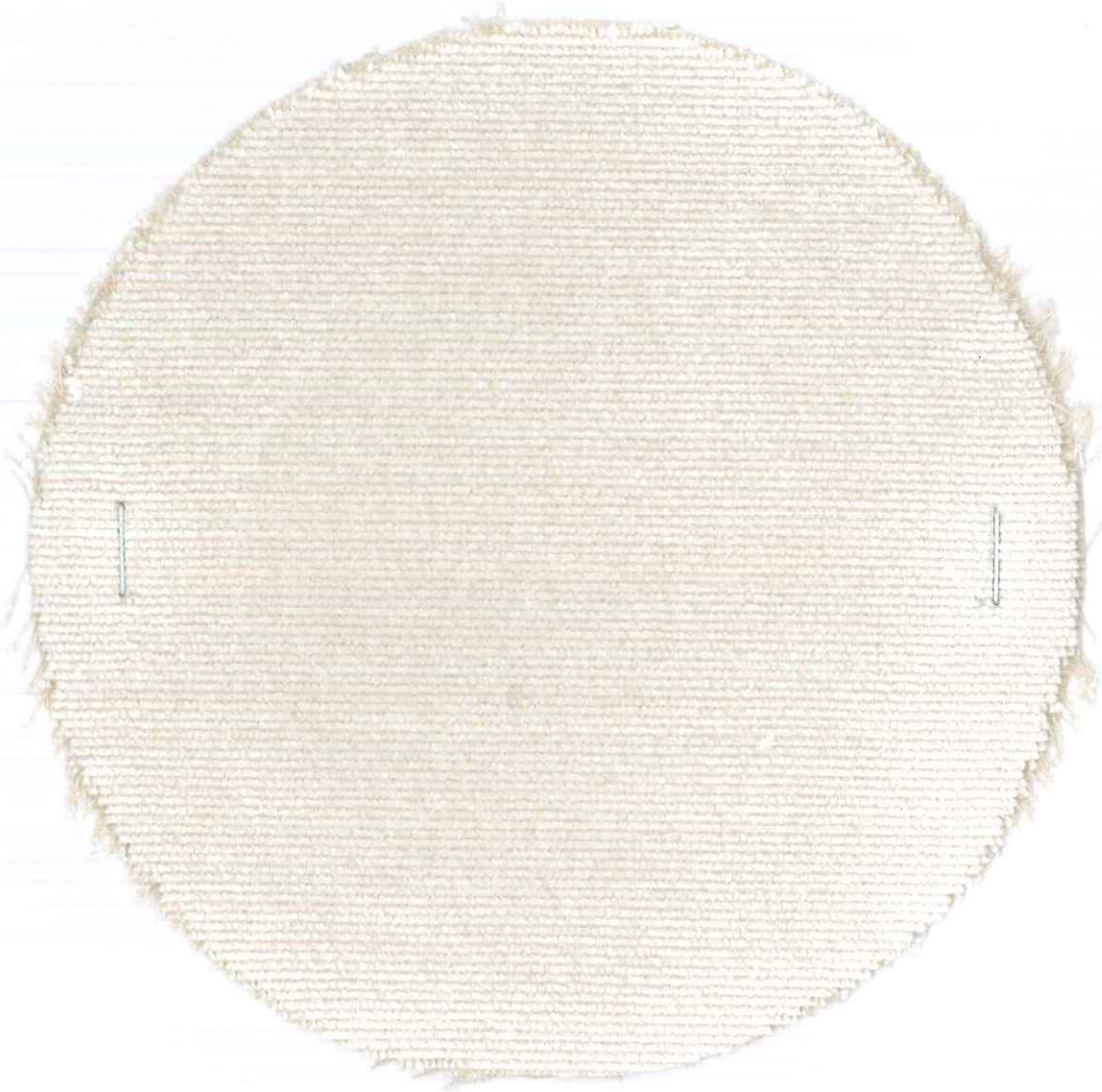
Appendix

Article: **600167 Proof 2766**

Method: **Determination of fabric propensity to surface fuzzing and to pilling - Part 2: Modified Martindale method ISO 12945 (2000-11) in accordance to DIN EN 14465 (2006-09)**



Number of cycles	Mark*
500	4-5
1.000	4-5
2.000	4
5.000	4

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Appendix

Article: **600167 Proof 2766**

Method: **Determination of fabric propensity to surface fuzzing and to pilling - Part 2: Modified Martindale method ISO 12945 (2000-11) in accordance to DIN EN 14465 (2006-09)**

Number of cycles	Mark*
500	4-5
1.000	4-5
2.000	4
5.000	4

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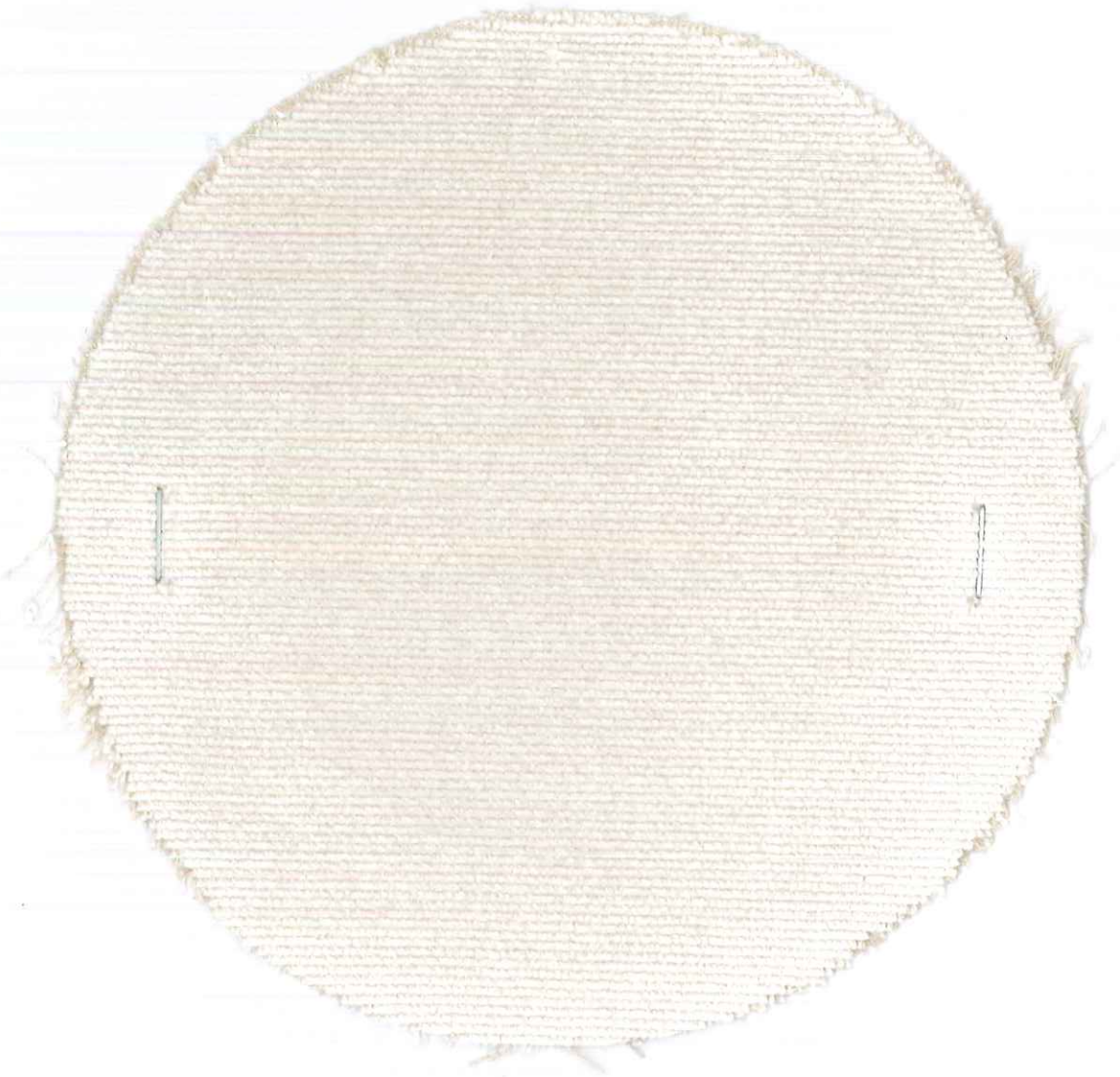
Appendix

Article: **600167 Proof 2766**

Method: **Determination of fabric propensity to surface fuzzing and to pilling - Part 2: Modified Martindale method ISO 12945 (2000-11) in accordance to DIN EN 14465 (2006-09)**



Number of cycles	Mark*
500	4-5
1.000	4-5
2.000	4
5.000	4