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Test report 200/25 Ha 01/07/2025

Customer: Ms. Meike Ludwig
Assignment from: 10/06/2025
Received: 20/06/2025

Assignment:

No.	Test	Standard Test conditions
1.	Abrasion resistance of fabrics by Martindale method – Part 2: Determination of specimen breakdown	**DIN EN ISO 12947-2:2017-03** (procedure) [accredited test method] **DIN EN 14465:2006-09** (evaluation) Abradant: abradant fabric according to DIN EN ISO 12947-1 (wool) Nominal pressure: 12 kPa **Sample 1 and sample 2**
2.	Fabric propensity to surface pilling, fuzzing or matting	**DIN EN ISO 12945-2:2021-04** (modified Martindale method) [accredited test method] **DIN EN ISO 12945-4:2021-04** (Assessment of pilling, fuzzing and matting by visual analysis) [accredited test method] **DIN EN 14465:2006-09** (evaluation) Abradant: abradant fabric according to DIN EN ISO 12947-1 (wool) Loading weight: 415 g Number of test specimens: 3 Number of evaluators: 2 (evaluation according to Empa W3) **Sample 1**

Sample:

2 upholstery fabrics

Coding for test	Identification by customer
Sample 1	Article 21305
Sample 2	Article 11038

Sampling: The samples were taken by the customer.

Realisation of the test: The measurement samples were taken and tested in compliance with the above-mentioned regulations.

Testing period: 20/06/2025 - 27/06/2025

Test results:

1. Abrasion resistance

Sample 1

at 3,000 rubs — pole loops are slightly crushed
change in colour: grade 4-5

at 20,000 rubs — pole loops are heavily abraded
no threads are destroyed in the flat area

at 25,000 rubs — pole loops are heavily abraded
1 thread is destroyed in the flat area

at 35,000 rubs — pole loops are heavily abraded
1 thread is destroyed in the flat area

at 40,000 rubs — pole loops are heavily abraded
1 thread is destroyed in the flat area

at 50,000 rubs — pole loops are heavily abraded
no thread are destroyed if there are few flat areas

The grade 5 represents the best grade and the grade 1 the worst grade when evaluating the change in colour.

The more flat areas there are, the faster the sample is destroyed.

The evaluated abrasion interval is 20,000 rubs.

For the classification according to DIN EN 14465, the number of destroyed threads is evaluated. 3 threads must be destroyed or if the pole is abraded. Depending on what happens first.

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The quoted result shall be defined as the lowest individual test result of all test specimen tested.

The fabric can be classified in **category B** according to DIN EN 14465 with regard to abrasion resistance.

Enclosed you will find test samples of each of the specified number of rubs.

Sample 2

at 3,000 rubs	pole loops are slightly abrades change in colour: grade 3-4
at 100,000 rubs	pole loops are heavily abraded the pole is not abraded

The grade 5 represents the best grade and the grade 1 the worst grade when evaluating the change in colour.

The evaluated abrasion interval is ≥ 100,000 rubs.

For the classification according to DIN EN 14465, the number of destroyed threads is evaluated. The pole must be abraded. Depending on what happens first.

The quoted result shall be defined as the lowest individual test result of all test specimen tested.

The fabric can be classified in **category A** according to DIN EN 14465 with regard to abrasion resistance.

Enclosed you will find test samples of each of the specified number of rubs.

2. Pilling

Sample 1

Number of cycles	Pilling			
	Result 1 [Grade]	Result 2 [Grade]	Result 3 [Grade]	**Average** [Grade]
125	4-5	4-5	4-5	4-5
500	4-5	4-5	4-5	4-5
1000	4-5	4-5	4-5	4-5
2000	**4-5**	**4***	**4-5**	**4-5**
5000	4	3-4*	4	4
7000	4	3-4*	4	4

* The pills are located in the smooth area. The more smooth areas there are, the more pills are created.

Number of cycles	Fuzzing			
	Result 1 [Grade]	Result 2 [Grade]	Result 3 [Grade]	**Average** [Grade]
125	4-5	4-5	4-5	4-5
500	4-5	4-5	4-5	4-5
1000	4	4	4	4
2000	**4**	**4**	**4**	**4**
5000	4	4	4	4
7000	4	4	4	4

Both values averaged result in a grade of 4.

The grade 5 is the best grade and the grade 1 is the worst grade.

The fabric can be classified in **category B** according to DIN EN 14465 with regard to pilling.

In the enclosure you get one stressed sample of 2000 cycles and two stressed samples of 7000 cycles for inspection.

The testing results are exclusively related to the sample under conditions as received.

S. Haase

S. Haase
Head of the Testing Centre

Enclosure: stressed test samples abrasion and pilling