

Laboratory of Chemical Instrumental Analysis

Łukasiewicz Research Network – Lodz Institute of Technology,
90-570 Lodz, 19/27 Marii Skłodowskiej-Curie Str., phone 48 42 307-09-01
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Łódź, 13th June 2023

L-295/2023

TEST CERTIFICATE No BL-AI 282/490/2023/A

- 2. Subject of study ^{x)}:** Sample – furniture upholstery fabric MAGNI – raw material composition 100 % polyester
- 3. Date of receiving sample for testing:** 26.05.2023
- 4. Date of the test conducting:** 29.05. – 12.06.2023
- 5. Sampling:** sample in a proper size, in a proper condition for tests, supplied by the customer

RESULTS OF THE TESTS

Tested feature	Result of the test [degree]	Reference document	Test conditions	Level of requirements for categories according to PN-EN 14465:2005 + A1:2007		
				A	B	C
Colour fastness to: - artificial light ¹⁾	a/ 6-7	PN-EN ISO 105-B02:2014-11 Method No 2	Device: Xenotest Alpha + Light conditions: A1. Radiation measurement in the range (300-400) nm. Sample rotation was not used.	≥ 6	≥ 5	≥ 4

¹⁾ Colour fastness according to "Blue scale", indicator "8" means – no change in colour of the sample, indicator "1" means – big change in colour

a/ change in colour of the sample

Remarks:

1. Test results refer only to the tested material.
2. Neither of the parts of this test certificate can be copied without written permission of the Head of the Laboratory.
3. ^{x)} Data provided by the principal/customer.
4. Total number of pages of the test certificate: 1.

Test conducted by:
Gabriela Pałucka MSc Eng.



Number of copies of the test certificate: 3

The test certificate receive:

- Customer - 2 copies
- The ŁUKASIEWICZ Research Network – Lodz Institute of Technology – BL-AI - 1 copy

Authorized by:

LABORATORIUM CHEMICZNYCH
ANALIZ INSTRUMENTALNYCH
Z-CIA KIEROWNIKA

mgr inż. Zdzisława Mrozińska

- THE END -



Łukasiewicz

Lodz Institute of Technology

Laboratory of Textile Metrology and Electrostatics

Łukasiewicz Research Network – Lodz Institute of Technology,

90-570 Lodz, 19/27 Marii Skłodowskiej-Curie Str.,

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Laboratory: 90-520 Lodz, 118 Gdanska Str., phone 48 42 2534419, fax 48 42 2534490

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AB 164

TEST REPORT NO. BL-ME 317.1 / 2023 / B / A

2. Name and description of tested material: the sample: ^x the upholstery product

3. Date of receiving material for testing: 2023-05-26

4. Date of test performance: 2023-06-01 ÷ 12

5. Samples taken by: ^x correct sample size in appropriate state for testing, taken by the Client and delivered with/without the Sampling Protocol

6. Tests carried out according to: methods presenting in testing table

Results of Laboratory Tests

see page 2/2

Test performed by: Elżbieta Olczak

1. Test results refer only to the tested material.
2. Neither of the parts of this Test Report can be copied without written permission of the Head of the Laboratory; it can be copied only as a whole document.
3. Test Report presents test results included within accreditation field of testing.
4. Test results not included in accreditation scope, if occur, are marked with* in the test results table, at the parameter name.
5. Test Report consists of test results carried out in location 90-520 Łódź, ul. Gdańska 118 (G) / 92-103 Łódź, ul. Brzezińska 5/15 (B).
6. Measurement uncertainty, if it is specified, has been determined according to the recommendations presented in document EA-4/16. Presented values of uncertainty constitute expanded uncertainty at 95% confidence level and coverage factor $k = 2$.
7. Laboratory uses the requirements of ILAC-G8:09/2019. The conformity statement of test result with requirements in specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limits in specification. The conformity statement's rules given by Client could be allowed.

Test Report date: 2023-06-14

Number of Test Report 's copies: 2

Test Report handed to:

2) Laboratory of Textile Metrology and Electrostatics (location: 5/15 Brzezińska str.) - 1 copy.

Test Report prepared by:

Patrycja Bąk

Person authorizing the Test Report:

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
I ELEKTROSTATYKI
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

TEST REPORT NO. BL-ME 317.1 / 2023 / B / A

Parameter		Value	Remarks
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	5	PN-EN ISO 12947-2:2017-02 + PN-EN 14465:2005+A1:2007, Annex A
	1 specimen	90 000	sample conditioned according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, RH: 65% ± 4%, the abradant: the standard woolen fabric, the nominal pressure used in the test: 12 kPa, magnification factor in the magnifying device: 8. <u>Criterion of destruction of the testing specimens in accordance with that standard:</u> the product with shenille fabric – three threads are completely broken or when chenille pile is fully worn off (whatever comes first).
	2 specimen	90 000	
	3 specimen	90 000	
	4 specimen	90 000	
	Total abrasion resistance (the lowest individual result)	90 000	
<u>Evaluation:</u> according to PN-EN 14465:2005 + A1:2007: A category: number of rubs ≥ 35 000 rubs, B category: number of rubs: 12 000 ÷ 30 000, C category: number of rubs: 4 000 ÷ 10 000			

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
I ELEKTROSTATYKI
Z-CA KIBROWNIKA

mgr inż. Jerzy Andrysiak

The end of Test Report

Laboratory of Textile Metrology and Electrostatics

Łukasiewicz Research Network – Łódź Institute of Technology,

90-570 Łódź, 19/27 Marii Skłodowskiej-Curie Str.,

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TEST REPORT NO. BL-ME 317.2 / 2023 / B / A

2. Name and description of tested material: the sample: ^x the upholstery product

3. Date of receiving material for testing: 2023-05-26

4. Date of test performance: 2023-06-07

5. Samples taken by: ^x correct sample size in appropriate state for testing, taken by the Client and delivered with/without the Sampling Protocol

6. Tests carried out according to: methods presenting in testing table

Results of Laboratory Tests

see page 2/2

Test performed by: Elżbieta Olczak

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7. Laboratory uses the requirements of ILAC-G8:09/2019. The conformity statement of test result with requirements/specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity statement's rules given by Client could be allowed.

Test Report date: 2023-06-14

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Test Report prepared by:

Patrycja Bąk

Person authorizing the Test Report:

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
I ELEKTROSTATYKI
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

TEST REPORT NO. BL-ME 317.2 / 2023 / B / A

Parameter		Value	Test method
Propensity to surface fuzzing, pilling or matting, grade <u>- pilling</u> the number of rubs	125	5	PN-EN ISO 12945-2:2021-04 PN-EN ISO 12945-4:2021-04 (modified Martindale method) sample conditioned according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, RH: 65% ± 4%, the abradant: the standard woolen fabric; number of test specimens: 3, number of evaluators: 3, mass of weight: (415 ± 2) g.
	500	5	
	1 000	4 – 5	
	2 000	4 – 5 partially formed pills	
	5 000	4 – 5	
	7 000	4 – 5	
<u>- fuzzing</u> the number of rubs	125	4 – 5	
	500	4 – 5	
	1 000	4 – 5	
	2 000	4 slight surface fuzzing	
	5 000	4	
	7 000	4	
<u>- matting</u> the number of rubs	125	5	
	500	5	
	1 000	5	
	2 000	5 no change	
	5 000	5	
	7 000	5	
Evaluation according to PN-EN 14465:2005+A1:2007: A category: grade ≥ 4 – 5; B category: grade 4; C category: grade 3 – 4; D category: grade 3			

Person authorizing the Test Report

TELEKOMUNIKACJE
Z-CIA KIEROWNIKA

mgr inż. Jerzy Andrysiak

The end of Test Report



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Lodz Institute of Technology

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TEST REPORT NO. BL-ME 317.3 / 2023 / B

2. Name and description of tested material:^x the sample: **the upholstery product**

3. Date of receiving material for testing: 2023-05-26

4. Date of test performance: 2023-06-13

5. Samples taken by:^x correct sample size in appropriate state for testing, taken by the Client and delivered without the Sampling Protocol

6. Tests carried out according to: methods presenting in testing table

Results of Laboratory Tests

see page 2/2

Test performed by: Elżbieta Olczak

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4. Measurement uncertainty, if it is specified, has been determined according to the recommendations presented in document EA-4/16. Presented values of uncertainty constitute expanded uncertainty at 95% confidence level and coverage factor 2.

5. Laboratory uses the requirements of ILAC-G8:09/2019. The conformity statement of test result with requirements/specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity statement's rules given by Client could be allowed.

Test Report date: 2023-06-14

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Test Report prepared by:

Patrycja Bąk

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
I ELEKTROSTATYKI
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

TEST REPORT NO. BL-ME 317.3 / 2023 / B

Parameter	Value	Remarks
Seam slippage resistance, mm: <u>Longitudinal direction</u> The mean value of resistance to perforation in the seam for longitudinal direction, mm - individual results, mm <u>Cross direction</u> The mean value of resistance to perforation in the seam for cross direction, mm - individual results, mm	4 ± 0 3,5; 4; 4; 4; 4 3 ± 0 2,5; 3; 3; 3; 2,5	PN-EN ISO 13936-2:2005 sample conditioned according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, RH: 65% ± 4%, tensile tester: Hounsfield H50 KM, testing force: 180 N, 100% PES sewing threads (74 ± 5) tex, the number of sewing needle: 110, the number of stitch: 32±2/100 mm, rate of extension: 50 mm/min. number of test specimens: 5
Evaluation according to PN-EN 14465:2005 + A1:2007: requirements level: A category: ≤ 4 mm; B category: ≤ 6 mm; C category: ≤ 8 mm		

Person authorizing the Test Report

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The end of Test Report



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TEST REPORT NO. BL-ME 317.4 / 2023 / B

2. Name and description of tested material:^x the sample: **the upholstery product**

3. Date of receiving material for testing: 2023-05-26

4. Date of test performance: 2023-06-06

5. Samples taken by:^x limited sample size in appropriate state for testing, taken by the Client and delivered without the Sampling Protocol

6. Tests carried out according to: methods presenting in testing table

Results of Laboratory Tests

see page 2/2

Test performed by: Elżbieta Olczak

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5. Laboratory uses the requirements of ILAC-G8:09/2019. The conformity statement to the result with requirements/specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity statement's rules given by Client could be allowed.

Test Report date: 2023-06-14

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Test Report prepared by:

Patrycja Bąk

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
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mgr inż. Jerzy Andrysiak

TEST REPORT NO. BL-ME 317.4 / 2023 / B

Parameter	Result	Test method
Resistance to drawing out the threads for longitudinal direction, degree	4 – 5	PN-79/P-04664 conditioned sample, sample conditioned according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, RH: 65% ± 4%, device for testing resistance to drawing out the threads: Shirley ICI Mace snag tester, England, number of the template used for sewing: 2, number of the roller revolutions: 200, number of tested specimens: 1 test specimen for longitudinal direction, 2 test specimens for cross direction. <u>Assessment according to photographic standard:</u> degree 5: very good resistance to drawing out the threads (without puffs), degree 4: good resistance to drawing out the threads, degree 3: sufficient resistance to drawing out the threads, degree 2: insufficient resistance to drawing out the threads, degree 1: very poor resistance to drawing out the threads.
Resistance to drawing out the threads for cross direction, degree	4 – 5	

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
 I ELEKTROSTATYKI
Z-CA KIEROWNIKA
mgr inż. Jerzy Andrystek

_____ The end of Test Report _____

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zdzislaw.mrozinska@lit.lukasiewicz.gov.pl

Łódź, 13th June 2023

L-295/2023

TEST CERTIFICATE No BL-AI 282/490/2023/A/I

2. **Subject of study ^{X)}:** Sample – furniture upholstery fabric MAGNI – raw material composition 100 % polyester
3. **Date of receiving sample for testing:** 26.05.2023
4. **Date of the test conducting:** 13.06.2023
5. **Sampling:** sample in a proper size, in a proper condition for tests, supplied by the customer

RESULTS OF THE TESTS

Tested feature	Result of the test [degree]	Reference document	Test conditions	Level of requirements for categories according to PN-EN 14465:2005 + A1:2007		
				A	B	C
Colour fastness to:						
- Dry rubbing ¹⁾ : longitudinal direction	a/ 5	PN-EN ISO 105-X12:2016-08	Acclimatization time: 4h Temperature of the test: 19.3°C Humidity of the test: 43.7% rubbing pick: Ø 16±0.1mm push: 9±0.2 N degree of moisturising of the rubbing cotton fabric: 100%	≥ 4-5	≥ 4	≥ 3-4
cross direction	a/ 5					
- Wet rubbing ¹⁾ : longitudinal direction	a/ 5			≥ 3-4	≥ 3	≥ 2-3
cross direction	a/ 5					

¹⁾ Colour fastness according to "Grey scale", indicator "5" means – no change in colour of the cotton rubbing fabric, indicator "1" means – big change in colour
a/ staining - the cotton rubbing fabric

Remarks:

1. Test results refer only to the tested material.
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3. ^{X)} Data provided by the principal/customer.
4. Total number of pages of the test certificate: 1.

Test conducted by:
Gabriela Pałucka MSc Eng.



Number of copies of the test certificate: 3

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- Customer - 2 copies
- The ŁUKASIEWICZ Research Network – Lodz Institute of Technology – BL-AI - 1 copy

Authorized by:

LABORATORIUM CHEMICZNYCH
ANALIZ INSTRUMENTALNYCH
Z-CA KIEROWNIKA


mgr inż. Zdzisława Mrozińska

- THE END -