



Łukasiewicz

Instytut Włókiennictwa

**Laboratory of Testing Raw Materials, Textiles
and Electrostatic Properties**

The Łukasiewicz Research Network – Textile Research Institute,
92-103 Łódź, 5/15 Brzezińska Str., phone 48 42 6163142, fax 48 42 6792638
90-520 Łódź, 118 Gdańska Str., phone 48 42 2534419, fax 48 42 2534490
e-mail: bwitkowska@iw.lodz.pl, jandrysiak@iw.lodz.pl



AB 164

Testing Laboratory accredited by the Polish Centre for Accreditation

TEST REPORT NO. 321.1 / 2020 / B / A

2. **Name and description of tested material:** the sample: ^Λ the upholstery product EUREKA, declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2020-06-23
4. **Date of test performance:** 2020-06-25÷29
5. **Samples taken by:** ^Λ 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

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 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-G8:03/2009. 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 assessment rules given by Client could be allowed.

Test Report date: 2020-07-03

Number of Test Report 's copies: 2

Test Report handed to:

2) Laboratory for Testing Raw Materials, Textiles and Electrostatic Properties (location: 5/15 Brzezińska str.) - 1 copy.

Test Report prepared by:
Patrycja Bąk

Person authorizing the Test Report:

Laboratorium Badań Surowców, Wyrobów
Włókienniczych i Własności Elektrostatycznych
GŁÓWNY SPECJALISTA
Z-CIA KIEROWNIKA

mgr inż. Jerzy Andrysiak

Sieć Badawcza Łukasiewicz-
Instytut Włókiennictwa
LABORATORIUM BADAŃ SUROWCÓW
WYROBÓW WŁÓKIENNICZYCH
I WŁASNOŚCI ELEKTROSTATYCZNYCH
92-103 Łódź, ul. Brzezińska 5/15
tel. 42 61 63 142, fax 42 67 92 638

TEST REPORT NO. BM 321.1 / 2020 / 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 the conditioned sample,
	1 specimen	45 000	sample conditioned according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, R.H.: 65% ± 4%,
	2 specimen	50 000	the abradant: the standard woolen fabric,
	3 specimen	45 000	the nominal pressure used in the test: 12 kPa,
	4 specimen	50 000	magnification factor in the magnifying device: 8.
	Total abrasion resistance (the lowest individual result)	45 000	Criterion of <u>destruction of the testing</u> <u>specimens in accordance with that standard:</u> cut pile fabric – spots of 5 mm ² are fully worn off, without any damage to the row / columns thread.
Evaluation: according to PN-EN 14465:2005 + A1:2007: A category: number of rubs ≥ 45 000 rubs, B category: number of rubs: 25 000 ÷ 40 000, C category: number of rubs: 10 000 ÷ 20 000			

_____ **The end of Test Report** _____

Person authorizing the Test Report

Laboratorium Badań Surowców, Wytrobów
Włókienniczych i Własności Elektrostatycznych
GŁÓWNY SPECJALISTA
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak



Łukasiewicz

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AB 164

Testing Laboratory accredited by the Polish Centre for Accreditation

TEST REPORT NO. 321.2 / 2020 / B / A

2. declared raw material composition: 100% Polyester.
3. Date of receiving material for testing: 2020-06-23
4. Date of test performance: 2020-06-25
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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7. Laboratory uses the requirements of ILAC-G8:03/2009. 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 assessment rules given by Client could be allowed.

Test Report date: 2020-07-03

Number of Test Report 's copies: 2

Test Report handed to:

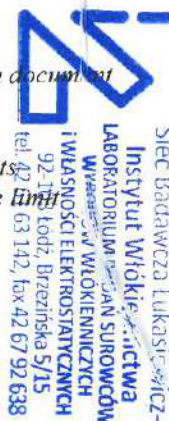
2) Laboratory for Testing Raw Materials, Textiles and Electrostatic Properties (location: 5/15 Brzezińska str.) - 1 copy.

Test Report prepared by:
Patrycja Bąk

Person authorizing the Test Report:

Laboratorium Badań Surowców, Wytrobów
Włókienniczych i Własności Elektrostatycznych
GŁÓWNY SPECJALISTA
Z-CIA KIEROWNIKA

mgr inż. Jerzy Andrzyśiak



TEST REPORT NO. BM 321.2 / 2020 / B / A

Parameter		Value	Remarks
Propensity to surface fuzzing and pilling, grade	the number of rubs		PN-EN ISO 12945-2:2002 (modified Martindale method) the conditioned sample, the abradant: the standard woolen fabric; mass of weight: 415 ± 2 g;
	500	5	
	1 000	4 – 5	
	2 000	4 – 5 Slight Surface fuzzing	
	5 000	4	
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			

_____ The end of Test Report _____

Person authorizing the Test Report

Laboratorium Badani Surwiw, Wyrobw
Wloklenniczych i Wlasnosci Elektrostatycznych
GLOWNY SPECJALISTA
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak



Łukasiewicz

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TEST REPORT NO. BM 321.3 / 2020 / B

2. **Name and description of tested material:** the sample: the upholstery product EUREKA, declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2020-06-23
4. **Date of test performance:** 2020-06-30
5. **Samples taken by:** 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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3. 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).
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5. Laboratory uses the requirements of ILAC-G8:03/2009. The conformity statement of test results requirements/specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity assessment rules given by Client could be allowed.

Test Report date: 2020-07-03

Number of Test Report 's copies: 2

Test Report handed to:

2) Laboratory for Testing Raw Materials, Textiles and Electrostatic Properties (location: 5/15 Brzezińska str.) - 1 copy.

Test Report prepared by:
Patrycja Bąk

Person authorizing the Test Report

Laboratorium Badań Surowców, Wyrobów
Włókienniczych i Własności Elektrostatycznych
GŁÓWNY SPECJALISTA
Z-CIA KIEROWNIKA

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LABORATORIUM BADAŃ SUROWCÓW
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ELEKTROSTATYCZNYCH
92-103 Łódź, Brzezińska 5/15
tel. 42 616 31 42, fax 42 67 92 63 8

TEST REPORT NO. BM 321.3 / 2020 / 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	3 ± 0 3; 3,5; 3; 3,5; 3	PN-EN ISO 13936-2:2005 the conditioned sample 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
<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; 3,5; 4; 4; 4	
Evaluation according to PN-EN 14465:2005 + A1:2007: requirements level: A category: ≤ 4 mm; B category: ≤ 6 mm; C category: ≤ 8 mm		

_____ The end of Test Report _____

Person authorizing the Test Report

Laboratorium Badań Surowców, Wyrobów
 Włókienniczych i Właściwości Elektrostatycznych
 GŁÓWNY SPECJALISTA
 Z-CIA KIEROWNIKA

mgr inż. Jerzy Andrysiak



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TEST REPORT NO. BM 321.4 / 2020 / B

2. **Name and description of tested material:** the sample: the upholstery product **EUREKA**, declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2020-06-23
4. **Date of test performance:** 2020-06-26
5. **Samples taken by:** 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 Oleczak

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 consists of test results carried out in location 90-520 Łódź, ul. Gdańska 118 92-103 Łódź, ul. Brzezińska 5/15(B).*
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 and coverage factor $k = 2$.*
5. *Laboratory uses the requirements of ILAC-G8:03/2009. The conformity statement of test results in the requirements/specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity assessment rules given by Client could be allowed.*

Test Report date: 2020-07-03

Number of Test Report 's copies: 2

Test Report handed to:

2) Laboratory for Testing Raw Materials, Textiles and Electrostatic Properties (location: 5/15 Brzezińska str.) - 1 copy.

Test Report prepared by:

Patrycja Bąk

Person authorizing the Test Report

Laboratorium Badań Surowców, Wyrobów
Włókienniczych i Własności Elektrostatycznych
GŁÓWNY SPECJALISTA
Z-CIA KIEROWNIKA

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92-103 Łódź, ul. Brzezińska 5/15
48 42 61 63 14 2, fax 42 67 92 63 8

TEST REPORT NO. BM 321.4 / 2020 / 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: 600, number of tested specimens: 2 for each direction
Resistance to drawing out the threads for cross direction, degree	4	Assessment according to photographic standard: 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.

The end of Test Report

Person authorizing the Test Report

Laboratorium Badań Surówców, Włóknienniczych i Właściwości Elektrostatycznych
GŁÓWNY SPECJALISTA
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

**Laboratory of Chemical Testing
and Instrumental Analysis**

The ŁUKASIEWICZ Research Network – Textile Research Institute,
92-103 Łódź, 5/15 Brzezinska Str.
phone no. +48 42 61-631-30 (128), fax +48 42 61-63-131
e-mail: piestrzeniewicz@iw.lodz.pl, alisiak@iw.lodz.pl

Łódź, 16th of July 2020

L-260/2020

TEST CERTIFICATE No BCH 250/558/2020/A/1

1. Name and address of the principal ^{X)}:
2. Subject of study ^{X)}: Sample of upholstery fabric EUREKA - composition: 100% Polyester
3. Date of receiving sample for testing: 23.06.2020
4. Date of the test conducting: 29.06 – 30.06.2020
5. Sampling : Sample in a proper size, in a proper condition for research, supplied by the customer

RESULTS OF THE TESTS

Tested feature	Result of the test ¹⁾ [degree]	Reference document	Technical specifications
Colour fastness to rubbing:			
- Dry			
weft	a/ 4-5	PN-EN ISO 105-X12:2016-08	Acclimatization time: 4h Temperature of the test: 21,1°C; Humidity of the test: 52,6%; rubbing pick: Ø 16±0,1mm; push: 9±0,2 N
warp	a/ 4-5		
- Wet			
weft	a/ 4-5		
warp	a/ 4-5		

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

Page No 2 of the TEST CERTIFICATE No BCH 250/558/2020/A

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
^{Y)} The decision-making principle in the event that the principle requires a statement of compliance: - in accordance with the Principle of Acceptance described in Procedure No 7.1:
a) Acceptance (compliant) – the results are within the tolerance limit, **in case of results close to the tolerance limit**, the risk of incorrect acceptance is up to 50%.
b) Rejection (incompatible) – the results obtained are outside the tolerance limit, **in the case of results close to the tolerance limit**, the risk of incorrect rejection is 50%.
^{Z)} The decision-making principle specified by the principal/customer.
4. Total number of pages of the test certificate: 2.

Test authorized by:

Laboratorium Badań Chemicznych
i Analiz Instrumentalnych
GŁÓWNY SPECJALISTA
Z CA KIEROWNIKA/KIEROWNIK TECHNICZNY

mgr inż. Agnieszka Lisiak-Kucińska

Confirmed by:
Laboratorium Badań Chemicznych
i Analiz Instrumentalnych
LIDER OBSZARU
KIEROWNIK
mgr inż. Jerzy Pięstrzeniewicz

Number of copies of the test certificate: 3

The test certificate receive:

- Customer – 2 copies
- The ŁUKASIEWICZ Research Network – Textile Research Institute – BCH – 1 copy

-THE END-

**Laboratory of Chemical Testing
and Instrumental Analysis**

The ŁUKASIEWICZ Research Network – Textile Research Institute,
92-103 Łódź, 5/15 Brzezinska Str.
phone no. +48 42 61-631-30 (128), fax +48 42 61-63-131
e-mail: jpiestrzeniewicz@iw.lodz.pl, alisiak@iw.lodz.pl

Łódź, 16th of July 2020

L-260/2020

TEST CERTIFICATE No BCH 250/558/2020/A

1. Name and address of the principal ^{X)}:
2. Subject of study ^{X)}: Sample of upholstery fabric EUREKA - composition: 100% Polyester
3. Date of receiving sample for testing: 23.06.2020
4. Date of the test conducting: 29.06 – 15.07.2020
5. Sampling: Sample in a proper size, in a proper condition for research, supplied by the customer

RESULTS OF THE TESTS

Tested feature	Result of the test ¹⁾ [degree]	Reference document	Test conditions
Colour fastness to: - artificial light	a/ 4	PN-EN ISO 105-B02:2014-11 Method 2	Device: Xenotest Alpha + Light conditions: A1 Radiation measurement in the range (300-400) nm Sample rotation was not used

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

Remarks:

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b) **Rejection** (incompatible) – the results obtained are outside the tolerance limit, in the case of results close to the tolerance limit, the risk of incorrect rejection is 50%.
^{Z)} The decision-making principle specified by the principal/customer.
4. Total number of pages of the test certificate: 1.

Test authorized by:
**Laboratorium Badań Chemicznych
i Analiz Instrumentalnych**
GŁÓWNY SPECJALISTA
Z-CA KIEROWNIKA/KIEROWNIK TECHNICZNY

Confirmed by:
**Laboratorium Badań Chemicznych
i Analiz Instrumentalnych**
LIDER OBSZARU
KIEROWNIK

mgr inż. Agnieszka Lisiak-Kucińska
Number of copies of the test certificate: 3

The test certificate receive:

- Customer – 2 copies
- The ŁUKASIEWICZ Research Network – Textile Research Institute – BCH – 1 copy

– THE END –

TEST CERTIFICATE ON FLAMMABILITY TESTING OF UPHOLSTERY COMPOSITE
No 199 / BP / 20
Test method:

PN-EN 1021-1:2014-12 Furniture. Assessment of the ignitability of upholstered furniture. Part 1: Ignition source smouldering cigarette.

Orderer*:

Subject of testing*:

Upholstery composition:

- upholstery fabric named EUREKA, composition: 100% Polyester
- T-3037 polyurethane foam, self-extinguish.

Testing sample with the correct size, in appropriate state for testing, supplied by the Orderer with its characteristic and without the Sampling Protocol.



Sieć Badawcza Łukasiewicz-
Instytut Włókiennictwa
LABORATORIUM BADAŃ
PALNOŚCI WYROBÓW
90-520 Łódź, Gdanska 118
tel. 42 25 34 435, fax 42 25 34 490

Results of testing:

Standard	Test method	Result
PN-EN 1021-1:2014-12	Ignition source: smouldering cigarette	Neither progressive smouldering ignition nor flaming ignition occurred.

The above test results relate only to the ignitability of the combination of materials under the particular conditions of test; they are not intended as a means of assessing the full potential fire hazard of the materials in use.

Tests performed by:

Test Certificate authorized by


Jakub Jędrzejewski Eng.

Laboratorium Badań Palności Wytrobów
GŁÓWNY SPECJALISTA
KIEROWNIK

mgr inż. Małgorzata Szejna

Sample received on: 24.06.2020

Test performed on: 08.07.2020

Test Certificate issued on: 08.07.2020

NOTES:

- The Testing results refer only to the tested sample.
- Test Certificate consists of 2 pages.
- Test Certificate must not be reproduced in another way, than as a whole without a prior written consent of the Testing Laboratory.
- The Orderer using this Test Certificate is responsible for the conformity between the product and sample submitted for testing.
- *Data provided by the Customer.

The Testing Laboratory accredited by the Polish Centre for Accreditation (PCA), No AB 029.

DETAILED TESTING RESULTSClimate conditions: temperature $(23 \pm 2) ^\circ\text{C}$; humidity $(50 \pm 5) \%$; time 24 hTesting conditions: temperature 22°C ; humidity 44 %**Preparation of test samples:**

the upholstery fabric, exposed to wetting in water and drying procedure, in accordance with Appendix D of the PN-EN 1021-1:2014-12 standard.

Upholstery composite characteristic:

Upholstery composition:

- upholstery fabric named EUREKA, composition: 100% Polyester
- T-3037 polyurethane foam, self-extinguish.

Criteria		Cigarette			Remarks
		1	2	3	
Smouldering criteria	Unsafe escalating combustion	NO	NO	-	Maximum cigarette smouldering time: 16 minutes 17 seconds
	Test assembly consumed	NO	NO	-	
	Smoulders to extremities	NO	NO	-	
	Smoulders through thickness	NO	NO	-	
	Smoulders more than 1 hour	NO	NO	-	Maximum upholstery composite destruction:
	In final examination, presence of active smouldering	NO	NO	-	
Flaming criteria	Occurrence of flames	NO	NO	-	horizontal [mm]
					vertical [mm]
					length width depth length width depth
					70 18 4 67 14 4

Result of testing: Neither progressive smouldering ignition nor flaming ignition occurred.

END OF THE TEST CERTIFICATE

