

Laboratory of Flammability Testing

The Łukasiewicz Research Network - Textile Research Institute,

92-103 Łódź, 5/15 Brzezinska Str.

Laboratory: 90-520 Łódź, 118 Gdańska Str., phone 48 42 2534435 (436), fax 48 42 2534490

e-mail: mszejna@iw.lodz.pl



AB 029

TEST CERTIFICATE ON FLAMMABILITY TESTING OF UPHOLSTERY COMPOSITE

No 12 / 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*:

„TOPTEXTIL” Sp. z o.o.
ul. Mickiewicza 29
34-100 Wadowice



Sieć Badawcza Łukasiewicz-
INSTYTUT WŁOKIENICTWA
LABORATORIUM
BADAŃ PALNOŚCI WYROBÓW
ul. Gdańska 118, 90-520 Łódź

Subject of testing*:

Upholstery composite:

- upholstery fabric named GRETA, composition: 100% recycling polyester,
- T-3037 SG 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.

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:

Kostanek

Krzysztof Kostanek Ph.D.

Test Certificate authorized by

Laboratorium Badań Palności Wyrobów
KIEROWNIK

MS
mgr Inż. **Małgorzata Szejna**

Sample received on: 13.01.2020
Test performed on: 24.01.2020
Test Certificate issued on: 24.01.2020

NOTES:

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

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

DETAILED TESTING RESULTS

Climate conditions: temperature (23 ± 2) °C; humidity (50 ± 5) %; time 24 h

Testing conditions: temperature 21°C; humidity 32 %

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 composite:

- upholstery fabric named GRETA, composition: 100% recycling polyester,
- T-3037 SG polyurethane foam, self-extinguish

Criteria		Cigarette			Remarks					
		1	2	3						
Smouldering criteria	Unsafe escalating combustion	NO	NO	-	Maximum cigarette smouldering time: 15 minutes 47 seconds					
	Test assembly consumed	NO	NO	-						
	Smoulders to extremities	NO	NO	-						
	Smoulders through thickness	NO	NO	-	Maximum upholstery composite destruction:					
	Smoulders more than 1 hour	NO	NO	-						
	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
					69	13	3	68	16	3

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

END OF THE TEST CERTIFICATE

**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 6163130 (128), fax +48 42 6163131
 e-mail: jpiestrzeniewicz@iw.lodz.pl, a@siak@iw.lodz.pl

Łódź, 30th January 2020

L-8/2020

TEST CERTIFICATE No. BCH 8/37/2020/A

1. Name and address of the principal ¹⁾: „TOPTEXTIL” Sp. z o.o.
 ul. Mickiewicza 29, 34-100 Wadowice
2. Subject of study ²⁾: sample of furniture upholstery fabric GRETA – material composition:
 100 % Recykling Poliester
3. Date of receiving sample for testing: 08th January 2020
4. Date of the tests conducting: 20th January - 21st January 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 [degree]	Reference document	Technical specifications	Level of requirements for categories according to PN- EN 14465:2005 + A1:2007		
				A	B	C
Colour fastness to: - <i>dry rubbing</i> : ¹⁾		PN-EN ISO 105- X12:2016-08	Acclimatization conditions: - temperature: 20 ± 2 °C - relative humidity: 65 ± 4 % - time of acclimatisation: 4 h Test conditions: - ambient temperature and humidity - rubbing pick: Ø 16 ± 0,1 mm - push: 9 ± 0,2 N - degree of moisturising of the rubbing fabric: 95-100 %			
weft	a/ 4-5			≥ 4-5	≥ 4	≥ 3-4
warp	a/ 4-5					
- <i>wet rubbing</i> : ¹⁾						
weft	a/ 4-5			≥ 3-4	≥ 3	≥ 2-3
warp	a/ 4-5					

¹⁾ colour fastness according to "Grey scale", indicator "5" means – no change in colour in 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.
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 principal requires a statement of compliance – in accordance with the Principle of Acceptance described in Procedure No. 7.1:
 - **acceptance** (compliant) – the results are within the tolerance limit. The risk of incorrect acceptance is up to 50% in the case of results close to the tolerance limit;
 - **rejection** (incompatible) – the results obtained are outside the tolerance limit. The risk of incorrect rejection is 50% in the case of results close to the tolerance limit.^{Z)} The decision-making principle specified by the principal/customer.
4. Total number of pages of the test certificate: 2.

Tests authorized by:

LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
ZASTĘPCA NIEROZWINIKA
mgr inż. Agnieszka Lisjak-Kucińska

Confirmed by:
LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
KIEROWNIK
mgr inż. Jerzy Piastrowicz

Number of copies: 3

The test certificate receive:

- Customer - 2 copy
- The LUKASIEWICZ 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 6163130 (128), fax +48 42 6163131
 e-mail: jpiestrzeniewicz@iw.lodz.pl, alisiak@iw.lodz.pl

Łódź, 30th January 2020

L-8/2020

TEST CERTIFICATE No. BCH 8/37/2020/A/1

1. Name and address of the principal ^{X1}: „TOPTEXTIL” Sp. z o.o.
ul. Mickiewicza 29, 34-100 Wadowice
2. Subject of study ^{X1}: sample of furniture upholstery fabric GRETA – material composition:
100 % Recykling Poliester
3. Date of receiving sample for testing: 08th January 2020
4. Date of the tests conducting: 16th January - 27th January 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 [degree]	Reference document	Technical specifications	Level of requirements for categories according to PN- EN 14465:2005 + A1:2007		
				A	B	C
Colour fastness to: - artificial light ¹⁾	a/ 6	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 applied	≥ 6	≥ 5	≥ 4

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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3. ³⁾ Data provided by the principal/customer.
³⁾ The decision-making principle in the event that the principal requires a statement of compliance – in accordance with the Principle of Acceptance described in Procedure No. 7.1:
 - **acceptance** (compliant) – the results are within the tolerance limit. The risk of incorrect acceptance is up to 50% in the case of results close to the tolerance limit;
 - **rejection** (incompatible) – the results obtained are outside the tolerance limit. The risk of incorrect rejection is 50% in the case of results close to the tolerance limit.
4. Total number of pages of the test certificate: 2.

Tests authorized by:

LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
ZASTĘPCA KIEROWNIKA

mgr inż. Agnieszka Lisjak-Kucińska

Confirmed by
LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
KIEROWNIK

mgr inż. Jarzy Piastrowicz

Number of copies: 3

The test certificate receive:

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

- THE END -



AB 164

Testing Laboratory accredited by the Polish Centre for Accreditation

TEST REPORT NO. 2.1 / 2020 / B / A

1. **Test ordered by:** X „TOPTEXTIL” Sp. z o.o., 29 Mickiewicza Street, 34-100 Wadowice
2. **Name and description of tested material:** the sample: X the upholstery woven fabric GRETA, declared raw material composition: 100% Polyester Recycling.
3. **Date of receiving material for testing:** 2020-01-09
4. **Date of test performance:** 2020-01-22
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: Elzbieta 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 para....
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-G8:03/2009. The conformity statement of test result with requirements specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance given in specification. The conformity assessment rules given by Client could be allowed.



SIEC BADAŁ... ŁUKASIEWICZ-
 INSTYTUT WŁÓKIENICTWA
 LABORATORIUM BADAŃ SUROWCÓW,
 WYROBÓW WŁÓKIENICZYCH
 I WŁAŚNOŚCI ELEKTROSTATYCZNYCH
 92-103 Łódź, ul. Brzezińska 5/15
 tel. 42 61 63 142, fax 42 67 92 638

Test Report date: 2020-01-28

Number of Test Report 's copies: 2

Test Report handed to:

- 1) „TOPTEXTIL” Sp. z o.o., Wadowice - 1 copy,
- 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:

Name and surname: **ZASTĘPCA KIEROWNIKA**
 Function: **ZASTĘPCA KIEROWNIKA**
 Signature:

mgr inż. Jerzy Andrysiak

TEST REPORT NO. BM 2.1 / 2020 / B / A

Parameter	Value	Remarks
Seam slippage resistance, mm: <u>Warp</u> The mean value of seam slippage resistance for warp direction, mm - individual results, mm <u>Weft</u> The mean value of seam slippage resistance for weft direction, mm - individual results, mm	<p align="center">5 ± 0</p> <p align="center">5; 5; 5,5; 5; 5</p> <p align="center">6 ± 0</p> <p align="center">6; 7; 6; 7; 6</p>	PN-EN ISO 13936-2:2005 the conditioned sample, 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
<u>Evaluation:</u> 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 BADAŁ SURCZCÓW
 WYROBÓW WŁÓKIENNICZYCH
 I WŁASNOŚCI ELEKTROSTATYCZNYCH
 ZASTĘPCA KIEROWNIKA

mgr inż. Jerzy Andrysiak



AB 164

Testing Laboratory accredited by the Polish Centre for Accreditation

TEST REPORT NO. 2.2 / 2020 / B / A

1. Test ordered by: ^N „TOPTEXTIL” Sp. z o.o., 29 Mickiewicza Street, 34-100 Wadowice
2. Name and description of tested material: ^N the sample: the upholstery woven fabric GRETA, declared raw material composition: 100% Polyester Recycling.
3. Date of receiving material for testing: 2020-01-09
4. Date of test performance: 2020-01-23
5. Samples taken by: ^N 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 – 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
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-G8:03/2009. 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.



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 INSTYTUT WŁÓKIENNICZY I
 LABORATORIUM BADAŃ SURKOCÓW,
 WYROBÓW WŁÓKIENNICZYCH
 I WŁASNOŚCI ELEKTROSTATYCZNYCH
 92-103 Łódź, ul. Brzezińska 5/15
 tel. 42 61 63 142, fax 42 67 92 638

Test Report date: 2020-01-28

Number of Test Report 's copies: 2

Test Report handed to:

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- 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:

Name and surname: mgr inż. Jerzy Andrysiak
 Function: ZASTĘPCA KIEROWNIKA
 Signature:

mgr inż. Jerzy Andrysiak

TEST REPORT NO. BM 2.2 / 2020 / B / A

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

_____ **The end of Test Report** _____

Person authorizing the Test Report

LABORATORIUM BADAŃ I WYROBÓW WŁOKNIENICZYCH
I WŁASNOŚCI ELEKTROSTATYCZNYCH
ZASTĘPCA KIEROWNIKA

mgr inż. Jerzy Andrysiak



AB 164

Testing Laboratory accredited by the Polish Centre for Accreditation

TEST REPORT NO. 2.3 / 2020 / B / A

1. Test ordered by: ^X „TOPTEXTIL” Sp. z o.o., 29 Mickiewicza Street, 34-100 Wadowice
2. Name and description of tested material: ^X the sample: the upholstery woven fabric GRETA, declared raw material composition: 100% Polyester Recycling.
3. Date of receiving material for testing: 2020-01-09
4. Date of test performance: 2020-01-13=20
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

1. Test results refer only to the tested material.
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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-G8:03/2009. The conformity statement of test result with requirements specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance given in specification. The conformity assessment rules given by Client could be allowed.



SIEBARDAWA... ŁUKASIEWICZ-
INSTYTUT... NIGWA
LABORATORIUM BADAŃ SUBOWCÓW
WYROBÓW WŁÓKNIENICZYCH
I WŁAŚNOŚCI ELEKTROSTATYCZNYCH
92-103 Łódź, ul. Brzezińska 5/15
tel. 42 61 63 142, fax 42 67 92 638

Test Report date: 2020-01-28

Number of Test Report 's copies: 2

Test Report handed to:

- 1) „TOPTEXTIL” Sp. z o.o., Wadowice - 1 copy,
- 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:

Name and surname: **ZASTĘPCA KIEROWNIKA**
Function: **ZASTĘPCA KIEROWNIKA**
Signature: **ZASTĘPCA KIEROWNIKA**

mgr inż. Jerzy Andrzyiak

TEST REPORT NO. BM 2.3 / 2020 / B / A

Parameter		Value	Remarks
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	4 - 5	PN-EN ISO 12947-2:2017-02 + PN-EN 14465:2005+A1:2007, Annex A the conditioned sample, 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. Criterion of <u>destruction of the testing specimens in accordance with that standard</u> : flat woven fabric – three threads are completely boken.
	1 specimen	> 100 000 without reaching the end-point	
	2 specimen	> 100 000 without reaching the end-point	
	3 specimen	> 100 000 without reaching the end-point	
	4 specimen	> 100 000 without reaching the end-point	
Total abrasion resistance (the lowest individual result)		> 100 000 without reaching the end-point	
Evaluation: 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			

_____ **The end of Test Report** _____

Person authorizing the Test Report

LABORATORIUM BADAŁ SUROWCOWYCH
 WYROBÓW WŁÓKNIANICZYCH
 I WŁAŚNOŚCI ELEKTROSTATYCZNYCH
 ZASTĘPCA KIEROWNIKA

mgr inż. Jerzy Andrysiak