

Laboratory of Flammability Testing

Lukasiewicz Research Network – Lodz Institute of Technology,
90-570 Lodz, 19/27 Marii Skłodowskiej-Curie Str., phone +48 42 307 09 01
Laboratory: 90-520 Lodz, 118 Gdanska Str., phone +48 42 2534435 (436),
e-mail: krzysztof.kostanek@lit.lukasiewicz.gov.pl

TEST CERTIFICATE No 55 / BL - PW / 24

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

Subject of testing*:

Upholstery composite:

- upholstery fabric named ZORA ; composition: 100% Polyester
- flame-retardant foam RF 30120.

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:

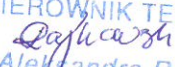
Standard	Test method	Result
PN-EN 1021-1:2014-12	Ignition source: smouldering cigarette	Neither progressive smouldering ignition nor flaming ignition occurred.

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:


Paulina Bartkovicz MSc.

Test Certificate authorized by

LABORATORIUM BADAŃ
PALNOŚCI WYROBÓW
KIEROWNIK TECHNICZNY

Aleksandra Rajkowska

Sample received on: 16.02.2024
Test performed on: 19.02.2024
Test Certificate issued on: 20.02.2024

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.

DETAILED TESTING RESULTS

Climate conditions: temperature (23 ± 2) °C; humidity (50 ± 5) %; time 24 h
 Testing conditions: temperature 21 °C; humidity 31 %

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 ZORA composition: 100% Polyester
 - flame-retardant foam RF 30120.

Test method according to PN-EN 1021-1:2014-12

Criteria		Cigarette			Remarks					
		1	2	3						
Smouldering criteria	Unsafe escalating combustion	NO	NO	-	Maximum cigarette smouldering time: 18 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
					70	14	4	68	13	4

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

END OF THE TEST CERTIFICATE



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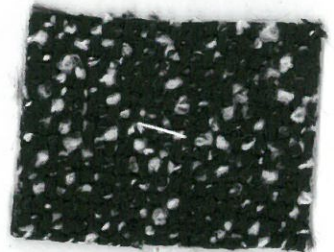
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Laboratory: 92-103 Lodz, 5/15 Brzezinska Str., phone 48 42 6163142
Laboratory: 90-520 Lodz, 118 Gdanska Str., phone 48 42 2534419
e-mail: beata.witkowska@lit.lukasiewicz.gov.pl; jerzy.andrysiak@lit.lukasiewicz.gov.pl

TEST REPORT NO. BL-ME 95.6 / 2024 / B

- 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 product ZORA**, declared raw material composition: 100% Polyester.
- 3. Date of receiving material for testing:** 2024-02-14
- 4. Date of test performance:** 2024-03-20
- 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

1. Test results refer only to the tested material.
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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).
4. Measurement uncertainty, if it is specified, has been determined according to the recommendations presented in document ILAC-G17:01/2021. Presented values of uncertainty constitute expanded uncertainty at 95% confidence level and coverage factor $k = 2$.
5. Laboratory uses the requirements of ILAC-G8:09/2019. The conformity statement of test results 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: 2024-04-02

Number of Test Report 's copies: 2

Test Report handed to:

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

Łukasiewicz
Instytut Technologiczny
Laboratorium Metrologii i Elektrostatyki
ul. Brzezińska 5/15
92-103 Łódź, tel. 42 61 63 142, fax 42 61 63 133

TEST REPORT NO. BL-ME 95.6 / 2024 / B

Parameter	Value	Remarks
The mean of bursting strength, kPa	750 ± 75	PN-EN ISO 13938-1:2020-05 (hydraulic method) sample conditioned according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, R.H: 65% ± 4%, burst device: PSI-BURST, test area: 50 cm ² , time at burst: (20±5) s, number of test specimens: 5.
The mean of height at burst, mm	23 ± 1	
Evaluation according to PN-EN 14465:2005 + A1:2007: requirements level: A category: ≥ 600 kPa ; B category: ≥ 400 kPa; C category: ≥ 200 kPa		

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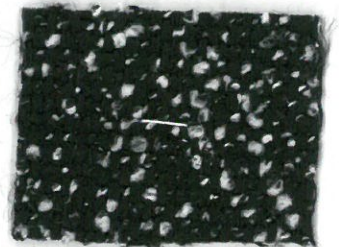
e-mail: beata.witkowska@lit.lukasiewicz.gov.pl; jerzy.andrysiak@lit.lukasiewicz.gov.pl

TEST REPORT NO. BL-ME 95.5 / 2024 / B

- 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 product ZORA**, declared raw material composition: 100% Polyester.
- 3. Date of receiving material for testing:** 2024-02-14
- 4. Date of test performance:** 2024-03-12
- 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



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Test Report date: 2024-04-02

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Test Report prepared by:

Patrycja Bąk

Person authorizing the Test Report

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Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

TEST REPORT NO. BL-ME 95.5 / 2024 / 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 4; 4; 4,5; 4,5; 4 5 ± 0 5; 5; 5; 4,5; 5	PN-EN ISO 13936-2:2005 climate for conditioning sample and testing 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		

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Laboratory of Textile Metrology and Electrostatics

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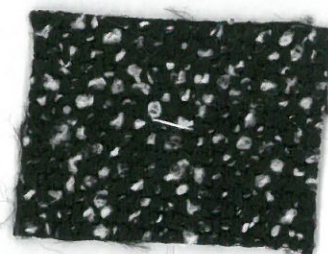
AB 164

TEST REPORT NO. BL-ME 95.4 / 2024 / B / A

- 1. Test ordered by:** ^x „TOPTEXTIL” Sp. z o.o., 29 Mickiewiczza Street, 34-100 Wadowice
- 2. Name and description of tested material:** the sample: ^x **The upholstery product ZORA**, declared raw material composition: 100% Polyester.
- 3. Date of receiving material for testing:** 2024-02-14
- 4. Date of test performance:** 2024-03-11
- 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 in 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: 2024-04-02

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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

Sieć Badawcza Łukasiewicz
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Laboratorium Metrologii Włókienniczej i Elektrostatyki
92-103 Łódź, ul. Brzezińska 5/15
tel. 42 61 63 147, fax 42 61 63 131

TEST REPORT NO. BL-ME 95.4 / 2024 / B / A

Parameter	Value	Test method	
Propensity to surface pilling, fuzzing and matting, grade <u>- pilling</u>	number of rubs	PN-EN ISO 12945-2:2021-04 (modified Martindale method) PN-EN ISO 12945-4:2021-04 climate for sample conditioning and testing according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, R.H. 65% ± 4%, abradant: standard woolen fabric, number of test specimens: 3, number of evaluators: 3, mass of weight: (415 ± 2) g.	
	125		5
	500		5
	1 000		5
	2 000		5
	5 000		5
	7 000		5 no change
<u>- fuzzing</u>	number of rubs		
	125		5
	500		4 – 5
	1 000		4 – 5
	2 000		4
	5 000		4
7 000	4 slight surface fuzzing		
<u>- matting</u>		not applicable	
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

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
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_____ The end of Test Report

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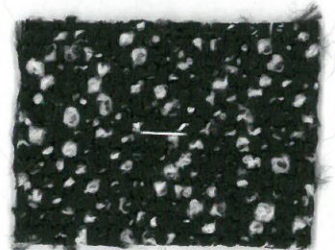
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e-mail: beata.witkowska@lit.lukasiewicz.gov.pl; jerzy.andrysiak@lit.lukasiewicz.gov.pl

TEST REPORT NO. BL-ME 95.3 / 2024 / 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 product ZORA**, declared raw material composition: 100% Polyester.
- 3. Date of receiving material for testing:** 2024-02-14
- 4. Date of test performance:** 2024-03-18÷25
- 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 of 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: 2024-04-02
Number of Test Report 's copies: 2
Test Report handed to:

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

Sieć Badawcza Łukasiewicz
Łódzki Instytut Technologiczny
Laboratorium Metrologii
Włókienniczej i Elektrostatyki
92-103 Łódź, ul. Brzezińska 5/15
tel. 42 63 142, fax 42 61 63 131

TEST REPORT NO. BL-ME 95.3 / 2024 / B / A

Parameter	Value	Remarks	
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	4	PN-EN ISO 12947-2:2017-02 + PN-EN 14465:2005+A1:2007, Annex A climate for conditioning sample and testing according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, R.H. 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 completely broken.
	1 specimen	80 000	
	2 specimen	90 000	
	3 specimen	80 000	
	4 specimen	90 000	
Total abrasion resistance (the lowest individual result)	80 000		

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

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
ELEKTROSTATYKI
Person authorizing the Test Report
Z-CA KIDROWNIKA

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_____ **The end of Test Report** _____



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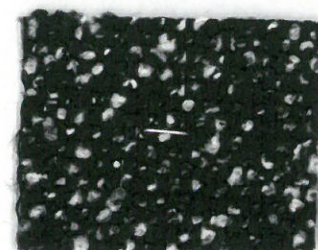
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e-mail: beata.witkowska@lit.lukasiewicz.gov.pl; jerzy.andrysiak@lit.lukasiewicz.gov.pl

TEST REPORT NO. BL-ME 95.2 / 2024 / 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 product MAGIC VELVET**, declared raw material composition: 100% Polyester.
- 3. Date of receiving material for testing:** 2024-02-14
- 4. Date of test performance:** 2024-03-12
- 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

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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

Sieć Baławcza Łódźki Instytut Technologiczny
Laboratorium Metrologii Włókienniczej i Elektrostatyki
92-103 Łódź, ul. Brzezińska 5/15
tel. 42 61 63 142, fax 42 61 63 131

TEST REPORT NO. BL-ME 95.2 / 2024 / B / A

Parameter		Value	Test method
Overall value average tear force, N	warp	160 ± 10	PN-EN ISO 13937-3:2002 (single tear method) climate for conditioning sample and testing according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, R.H. 65% ± 4%, tensile machine: Zwick 1120, rate of extension: 100 mm/min., distance between clamps: 100 mm, method of calculating average values: electronic; number of test specimens: 5 in each direction.
	weft	110 ± 0	
Evaluation: according to PN-EN 14465:2005 + A1:2007: A category: ≥ 40 N , B category: ≥ 30 N, C category: ≥ 25 N, D category: ≥ 20 N, E category: ≥ 15 N			

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
 I ELEKTROSTATYKI
 Z-CIA KIEROWNIKA

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_____ The end of Test Report _____



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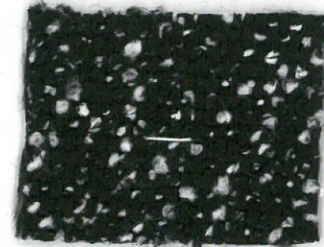
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e-mail: beata.witkowska@lit.lukasiewicz.gov.pl; jerzy.andrysiak@lit.lukasiewicz.gov.pl

TEST REPORT NO. BL-ME 95.1 / 2024 / B / A

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Results of Laboratory Tests

see: page 2/2



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Number of Test Report 's copies: 2

Test Report handed to:

- 1) „TOPTEXTIL” Sp. z o.o., Wadowice - 1 copy,
- 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 KIBROWNIKA
mgr inż. Jerzy Andrysiak

Sieć Nadawców Łukasiewicz Łódźki Instytut Technologiczny
Laboratorium Włókienniczej i Elektrostatyki
92-103 Łódź, ul. Brzezińska 5/15
tel. 42 61 63 142, fax 42 61 63 131

TEST REPORT NO. BL-ME 95.1 / 2024 / B / A

Parameter		Value	Test method
The mean of maximum force, N	longitudinal direction	1600 ± 100	PN-EN ISO 13934-1:2013-07 climate for conditioning sample and testing according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, R.H. 65% ± 4%, tensile machine: Hounsfield H5KS, rate of extension: 100 mm/min., pretension: 5N, distance between clamps: 200 mm, number of test specimens: 5 in each direction.
	cross direction	800 ± 40	
The mean of elongation at maximum force, %	longitudinal direction	25,0 ± 2,0	
	cross direction	22,5 ± 2,5	

Evaluation: according to PN-EN 14465:2005 + A1:2007:

A category: > 600 N, B category: ≥ 400 N, C category: ≥ 350 N, D category: ≥ 250 N

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKNIENICZEJ
I ELEKTROSTATYKI
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

_____ The end of Test Report _____

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

Laboratory:

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e-mail: agnieszka.lisiak-kucinska@lit.lukasiewicz.gov.pl,

gabriela.palucka@lit.lukasiewicz.gov.pl

Łódź, 19th March 2024

L-78/2024

TEST CERTIFICATE No BL-AI 76/186/2024/A/I

- Name and address of the principal ^{X)}:** Toptextil Sp. z o.o.
ul. Mickiewicza 29, 34-100 Wadowice
- Subject of study ^{X)}:** sample – furniture upholstery fabric ZORA, raw material
composition: 100 % polyester
- Date of receiving sample for testing:** 14.02.2024
- Date of the test conducting:** 22.02 - 08.03.2024
- 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 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 in colour of the sample

Remarks:

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

Test conducted by:
Marta Łatwińska PhD

Authorized by:

LABORATORIUM CHEMICZNYCH
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 – Lodz Institute of Technology – BL-AI - 1 copy

- THE END -

Laboratory of Chemical Instrumental Analysis

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gabriela.palucka@lit.lukasiewicz.gov.pl

Łódź, 19th March 2024

L-78/2024

TEST CERTIFICATE No BL-AI 76/186/2024/A

1. **Name and address of the principal ^{x)}:** Toptextil Sp. z o.o.
ul. Mickiewicza 29, 34-100 Wadowice
2. **Subject of study ^{x)}:** sample – furniture upholstery fabric ZORA, raw material
composition: 100 % polyester
3. **Date of receiving sample for testing:** 14.02.2024
4. **Date of the test conducting:** 18.03.2024
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: - <i>dry rubbing</i> : ¹⁾ warp weft - <i>wet rubbing</i> : ¹⁾ warp weft	a/ 4-5 a/ 4-5 a/ 4-5 a/ 4-5	PN-EN ISO 105- X12:2016- 08	- time of acclimatisation: 4 h - temperature of the test: 20.1 °C - humidity of the test: 33.0 % - rubbing pick: Ø 16 ± 0.1 mm - push: 9 ± 0.2 N - degree of moisturising of the rubbing fabric: 100 %	≥ 4-5 ≥ 3-4	≥ 4 ≥ 3	≥ 3-4 ≥ 2-3

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.
4. Total number of pages of the test certificate: 1.

Test conducted by:
Marta Łatwińska PhD

Authorized by:

LABORATORIUM CHEMICZNYCH
ANALIZ INSTRUMENTALNYCH
LIDER OBSZARU/KIEROWNIK

mgr inż. Agnieszka Lisiak-Kucińska

Number of copies of the test certificate: 3

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- THE END -