Łukasiewicz
Lodz Institute of Technology

Laboratory of Flammability Testing
Lukasiewicz Research Network – Lodz Institute of Technology,
90-570 Lodz, 19/27 Marii Sklodowskiej-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

AB 029

TEST CERTIFICATE No 18 / BL - PW / 25

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. Karola Wojtyły 13
34-100 Jaroszewice

Subject of testing*:

Upholstery composite:
- fabric named WAFFLE; 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:
Aleksandra Rajkowska

Test Certificate authorized by
LABORATORIUM BADAŃ PALNOŚCI WYROBÓW
KIEROWNIK
dr inż. Krzysztof Kostanek

Sample received on: 02.01.2025
Test performed on: 14.01.2025
Test Certificate issued on: 14.01.2025

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 23,4 °C; humidity 26 %

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:
- fabric named WAFFLE; composition: 100% Polyester,
- flame-retardant foam RF 30120.

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

<table>
<tr><th colspan="2" rowspan="2">Criteria</th><th colspan="3">Cigarette</th><th rowspan="2">Remarks</th></tr>
<tr><th>1</th><th>2</th><th>3</th></tr>
<tr><td rowspan="7">Smouldering criteria</td><td>Unsafe escalating combustion</td><td>NO</td><td>NO</td><td>-</td><td rowspan="4">Maximum cigarette smouldering time:

12 minutes 43 seconds</td></tr>
<tr><td>Test assembly consumed</td><td>NO</td><td>NO</td><td>-</td></tr>
<tr><td>Smoulders to extremities</td><td>NO</td><td>NO</td><td>-</td></tr>
<tr><td>Smoulders through thickness</td><td>NO</td><td>NO</td><td>-</td></tr>
<tr><td>Smoulders more than 1 hour</td><td>NO</td><td>NO</td><td>-</td><td rowspan="2">Maximum upholstery composite destruction:</td></tr>
<tr><td>In final examination, presence of active smouldering</td><td>NO</td><td>NO</td><td>-</td></tr>
<tr><td rowspan="3">Flaming criteria</td><td rowspan="3">Occurrence of flames</td><td rowspan="3">NO</td><td rowspan="3">NO</td><td rowspan="3">-</td><td colspan="3">horizontal [mm]</td><td colspan="3">vertical [mm]</td></tr>
<tr><td>length</td><td>width</td><td>depth</td><td>length</td><td>width</td><td>depth</td></tr>
<tr><td>68</td><td>11</td><td>4</td><td>68</td><td>11</td><td>4</td></tr>
</table>

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

END OF THE TEST CERTIFICATE

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Lodz Institute of Technology

Laboratory of Chemical Instrumental Analysis
Łukasiewicz Research Network – Lodz Institute of Technology,
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phone No +48 42 61-63-130 (128), fax +48 42 61-63-131
e-mail: agnieszka.lisiak-kucinska@lit.lukasiewicz.gov.pl,
gabriela.palucka@lit.lukasiewicz.gov.pl

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PCA Polskie Centrum Akredytacji BADANIA
AB 077

Łódź, 27th November 2024

L-606/2024

TEST CERTIFICATE No BL-AI 593/1214/2024/A/I

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 WAFFLE, raw material composition: 100 % polyester
3. **Date of receiving sample for testing:** 23.10.2024
4. **Date of the test conducting:** 12.11 - 22.11.2024
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: - *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 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:
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 -

Łukasiewicz
Lodz Institute of Technology

Laboratory of Chemical Instrumental Analysis
Łukasiewicz Research Network – Lodz Institute of Technology,
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e-mail: agnieszka.lisiak-kucinska@lit.lukasiewicz.gov.pl,
gabriela.palucka@lit.lukasiewicz.gov.pl

AB 077

Łódź, 27th November 2024

L-606/2024

TEST CERTIFICATE No BL-AI 593/1214/2024/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 WAFFLE, raw material composition: 100 % polyester
3. **Date of receiving sample for testing:** 23.10.2024
4. **Date of the test conducting:** 08.11 - 12.11.2024
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:		PN-EN ISO 105-X12:2016-08	- time of acclimatisation: 4 h - temperature of the test: 21.3 °C - humidity of the test: 36.8 % - rubbing pick: Ø 16 ± 0.1 mm - push: 9 ± 0.2 N - degree of moisturising of the rubbing fabric: 100 %			
- *dry rubbing:* 1)						
warp	a/ 4-5			≥ 4-5	≥ 4	≥ 3-4
weft	a/ 4-5					
- *wet rubbing:* 1)						
warp	a/ 4-5			≥ 3-4	≥ 3	≥ 2-3
weft	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.
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
The test certificate receive:
- Customer - 2 copies
- The ŁUKASIEWICZ Research Network – Lodz Institute of Technology – BL-AI - 1 copy

- THE END -

Łukasiewicz
Lodz Institute of Technology

Laboratory of Textile Metrology and Electrostatics

Łukasiewicz Research Network – Lodz Institute of Technology,
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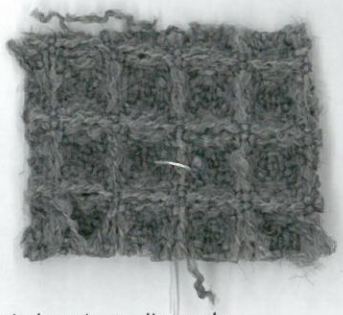
Laboratory: 90-520 Lodz, 118 Gdanska Str., phone 48 42 2534419
e-mail: *beata.witkowska@lit.lukasiewicz.gov.pl; jerzy.andrysiak@lit.lukasiewicz.gov.pl*

AB 164

TEST REPORT NO. BL-ME 737.2 / 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 woven fabric WAFFLE,** declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2024-10-22
4. **Date of test performance:** 2024-11-07
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: Iwona Rybak

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 ILAC-G17:01/2021. 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/ specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity statemen's rules given by Client could be allowed.*

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

Test Report date: 2024-11-12
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

TEST REPORT NO. BL-ME 737.2 / 2024 / B / A

Parameter		Value	Test method
Overall value avarage tear force, N	longitudinal direction	**296 ± 8**	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.
	cross direction	**291 ± 3**	
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-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

The end of Test Report

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.,
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*

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PCA Polskie Centrum Akredytacji BADANIA
AB 164

TEST REPORT NO. BL-ME 737.1 / 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 woven fabric WAFFLE,** declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2024-10-22
4. **Date of test performance:** 2024-11-06
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: Iwona Rybak

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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 ILAC-G17:01/2021. 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, specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity statemen's rules given by Client could be allowed.

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

Test Report date: 2024-11-12
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

TEST REPORT NO. BL-ME 737.1 / 2024 / B / A

Parameter		Value	Test method
The mean of maximum force, N	longitudinal direction	**1400 ± 0**	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: 10N, distance between clamps: 200 mm, number of test specimens: 5 in each direction.
	cross direction	**1800 ± 0**	
The mean of elongation at maximum force, %	longitudinal direction	**48,5 ± 2,0**	
	cross direction	**31,5 ± 1,5**	
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 WŁÓKIENNICZEJ I ELEKTROSTATYKI
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

The end of Test Report

Łukasiewicz
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Laboratory of Textile Metrology and Electrostatics

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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 737.6 / 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 woven fabric WAFFLE,** declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2024-10-22
4. **Date of test performance:** 2024-11-08
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: Iwona Rybak

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 (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 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: 2024-11-12
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.

Sieć Badawcza Łukasiewicz
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Laboratorium Metrologii Włókienniczej i Elektrostatyki
92-103 Łódź, ul. Brzezińska 5/15
tel. 42 61 63 142, fax 42 61 63 01

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 737.6 / 2024 / B

Parameter	Value	Remarks
The mean of bursting strength, kPa	**1098 ± 17**	PN-EN ISO 13938-1:2020-05 (hydraulic method) cliamte for conditioning sample and testing 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	**24 ± 1**	
Evaluation according to PN-EN 14465:2005 + A1:2007: requirements level: **A category: ≥ 600 kPa;** B category: ≥ 400 kPa; C category: ≥ 200 kPa		

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKIENNICZEJ
Z-CA KIEROWNIKA
mgr inż. Jerzy Andrysiak

The end of Test Report

Łukasiewicz
Lodz Institute of Technology

Laboratory of Textile Metrology and Electrostatics

Łukasiewicz Research Network – Lodz Institute of Technology,
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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*

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AB 164

TEST REPORT NO. BL-ME 737.5 / 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 woven fabric WAFFLE,** declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2024-10-22
4. **Date of test performance:** 2024-11-04
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: Iwona Rybak

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 ILAC-G17:01/2021. 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/ specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity statemen's rules given by Client could be allowed.*

Sieć Badawcza Łukasiewicz
Łódzki 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 date: 2024-11-12
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

TEST REPORT NO. BL-ME 737.5 / 2024 / B / A

Parameter	Value	Remarks
Seam slippage resistance, mm: Warp **The mean value of seam slippage resistance for warp direction, mm** - individual results, mm Weft **The mean value of seam slippage resistance for weft direction, mm** - individual results, mm	**3 ± 0** 3; 3; 3; 3; 3 **3 ± 0** 2; 3; 3; 3; 2	PN-EN ISO 13936-2:2005 climate for sample conditioning and testing according to PN-EN ISO 139:2006 + A1:2012, temp. 20° C ± 2 °C, R.H. 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

LABORATORIUM METROLOGII WŁÓKIENNICZEJ I ELEKTROSTATYKI
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

The end of Test Report

Łukasiewicz
Lodz Institute of Technology

Laboratory of Textile Metrology and Electrostatics
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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*

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PCA Polskie Centrum Akredytacji BADANIA
AB 164

TEST REPORT NO. BL-ME 737.4 / 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 woven fabric WAFFLE,** declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2024-10-22
4. **Date of test performance:** 2024-10-29÷30
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: Iwona Rybak

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 ILAC-G17:01/2021. 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/ specification takes place, when the test results together with expanded uncertainty does not exceed the tolerance limit given in specification. The conformity statemen's rules given by Client could be allowed.*

Sieć Badawcza Łukasiewicz Łódzki Instytut Technologiczny Laboratorium Metrologii Włókienniczej i Elektrostatyki 92-103 Łódź, ul. Brzezińska 5/15 tel. 42 6. 63 142, f 42 61 63 131

Test Report date: 2024-11-12
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

Parameter		Value	Test method
Propensity to surface fuzzing, pilling or matting, grade			PN-EN ISO 12945-2:2021-04 PN-EN ISO 12945-4:2021-04 (modified Martindale method) climate for sample conditioning 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; number of test specimens: 3, number of evaluators: 3, mass of weight: (415 ± 2) g.
- pilling	the number of rubs		
	125	5	
	500	5	
	1 000	4 – 5	
	2 000	4 – 5	
	5 000	4 – 5	
	7 000	**4 – 5** **partially formed pills**	
- fuzzing	the number of rubs		
	125	4 – 5	
	500	4 – 5	
	1 000	4 – 5	
	2 000	4 – 5	
	5 000	4 – 5	
	7 000	**4 – 5** **slight surface fuzzing**	
- matting		**not applicable**	

Person authorizing the Test Report

LABORATORIUM METROLOGII WŁÓKIENNICZEJ I ELEKTROSTATYKI
Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

The end of Test Report

Łukasiewicz
Lodz Institute of Technology

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ilac-MRA

PCA Polskie Centrum Akredytacji BADANIA
AB 164

TEST REPORT NO. BL-ME 737.3 / 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 woven fabric WAFFLE,** declared raw material composition: 100% Polyester.
3. **Date of receiving material for testing:** 2024-10-22
4. **Date of test performance:** 2024-11-04÷06
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: Iwona Rybak

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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 statemen's rules given by Client could be allowed.*

Sieć Badawcza Łukasiewicz
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92-103 Łódź ul. Brzezińska 5/15
tel. 42 61 63 ... fax 42 61 63 131

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Patrycja Bąk

Person authorizing the Test Report:

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Z-CA KIEROWNIKA
mgr inż. Jerzy Andrysiak

TEST REPORT NO. BL-ME 737.3 / 2024 / B / A

Parameter		Value	Remarks
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	3 – 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 destruction of the testing specimens in accordance with that standard: flat woven fabric – three threads completely broken.
	1 specimen	14 000	
	2 specimen	12 000	
	3 specimen	14 000	
	4 specimen	12 000	
	Total abrasion resistance (the lowest individual result)	**12 000**	
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			

Person authorizing the Test Report

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Z-CA KIEROWNIKA

mgr inż. Jerzy Andrysiak

The end of Test Report