

**Laboratory of Testing
Textile Raw Materials and Fabrics**

92-103 Łódź, 5/15 Brzezinska Str., phone 48 42 6163140, fax 48 42 6792638

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LABORATORY OF TESTING TEXTILE RAW MATERIALS AND FABRICS
Testing Laboratory accredited by the Polish Centre for Accreditation

TEST CERTIFICATE NO. BM 87.5.4.1 / 2016 / B / A

1. **Test ordered by:** „TOPTEXTIL” Sp. z o.o., Wadowicka Str.12; 30-415 Kraków
2. **Name and description of tested material:** the sample: *the upholstery fabric WINDMILL, , declared raw material composition: 100 % Poliester*
3. **Date of receiving material for testing:** 30.06.2016
4. **Date of test performance:** 12.07.2016
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

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; it can be copied only as a whole document.*
3. *Test Certificate 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. *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 $k = 2$.*

Certificate date: 2016-07-20

Number of Certificate copies: 2

Test Certificate handed to:

- 1) TOPTEXTIL Sp. z o.o., Kraków – 1 copy
- 2) Laboratory of Testing Textile Raw Materials and Fabrics - 1 copy.

Certificate prepared by:
Elżbieta Piekarek-Kubicka

Person authorizing the Test Certificate:

Name and surname:

Function:

Signature

Kierownik
Laboratorium Badań Surowców
i Włókien Włókienniczych
Instytut Włókiennictwa

mgr inż. Halina Królikowska

INSTYTUT WŁÓKIENICTWA
Laboratorium Badań Surowców
i Włókien Włókienniczych
92-103 Łódź, ul. Brzezinska 5/15

-verte-

TEST CERTIFICATE NO. BM 87.5.4.1 / 2016 / B / A

Parameter	Value	Remarks
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	PN-EN ISO 12947-2:2000 + AC:2006 + PN-EN 14465:2005+A1:2007, Annex A <i>Test conditions:</i> the abradant: the standard woollen fabric, the nominal pressure used in the test: 12 kPa, magnification factor in the magnifying device: 8, in holders used foam. Criterion of <u>destruction of the testing specimens in accordance with that standard:</u> at least three threads completely destroyed
	1 specimen	
	2 specimen	
	3 specimen	
	4 specimen	
	Total abrasion resistance (the lowest individual result)	
	4	
	8 000	
	6 000	
	6 000	
	6 000	
	6 000	

Evaluation:

according to PN-EN 14465:2005 + A1:2007: A category: number of rubs $\geq 35\ 000$ rubs,
B category: number of rubs: $12\ 000 \div 30\ 000$, **C category: number of rubs: $4\ 000 \div 10\ 000$**

The end of Test Certificate

Person authorizing the Test Certificate

Laboratorium Badawcze Surowców
i Wyrobów Włókienniczych
Instytut Włókiennictwa
mgr inż. Halina Królikowska

TEST CERTIFICATE NO. BM 87.5.4.2 / 2016 / B / A

Parameter	Value	Remarks
Seam slippage resistance, mm: <u>Warp</u> The mean value of seam slippage resistance for lengthwise direction, mm - individual results, mm <u>Weft</u> The mean value of seam slippage resistance for crosswise direction, mm - individual results, mm	2 2; 1,5; 2; 2; 2,5 3 2,5; 3; 2,5; 3; 3	PN-EN ISO 13936-2:2005 <i>Test conditions:</i> 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 testing 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		

_____ The end of Test Certificate _____

Person authorizing the Test Certificate


 mgr inż. Halina Królikowska
 Laboratorium Badań Surowców
 i Wyrobów Włókienniczych
 ul. Słowackiego 10, 01-644 Warszawa

TEST CERTIFICATE NO. BM 87.5.4.3 / 2016 / B / A

Parameter		Value	Remarks
Propensity to surface fuzzing and pilling,	<i>the number of rubs</i>		PN-EN ISO 12945-2:2002 (modified Martindale method) <i>Test conditions:</i> the abradant: the standard woolen fabric; mass of weight: 415 ± 2 g;
	500	4 - 5	
	1 000	4	
	2 000	3 - 4 Slight surface fuzzing and moderate pilling	
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 Certificate

Person authorizing the Test Certificate

Kierownik
Laboratorium Badania Surowców
i Włókien Włókienniczych
i Włókiennictwa
mgr inż. Halina Królikowska

**Laboratory of Chemical Testing
and Instrumental Analysis**

92-103 Lodz, 5/15 Brzezinska Str.
phone no. +48 42 6163130 (120, 128), fax +48 42 6163131
e-mail: jpiestrzeniewicz@iw.lodz.pl, labchem@iw.lodz.pl

Łódź 22nd July 2016

L - 286/2016

TEST CERTIFICATE No BCH 260/542/2016/A

- Name and address of the principal:** „TOPTEXTIL” Sp. z o.o.
ul. Wadowicka 12, 30 – 415 Kraków
- Name and description of tested sample:** sample of furniture upholstery fabric WINDMILL – declared material composition: 100 % PES
- Date of receiving sample for testing:** 04.07.2016
- Date of performance of testing:** 05.07. – 22.07.2016
- Sampling:** sample in a proper size, in a proper condition for research, supplied by the client

RESULTS OF THE TESTS

Property of investigation	Results	Testing method	Test conditions	Level of requirements for categories according to PN-EN 14465:2005 + A1:2007		
				A	B	C
Colour fastness to rubbing:			<u>Acclimatization conditions:</u> temperature: (20,0±2)°C; relative humidity: (65,0±2)%; time: 4h;			
- Dry ¹⁾	a/ 4-5	PN-EN ISO 105-X12:2005	<u>Test conditions:</u> ambient temperature; rubbing pick: Ø 16±0,1mm; push: 9±0,2 N; degree of moisturising of rubbing to fabric: 100%	≥ 4-5	4	3-4
- weft	a/ 4-5					
- warp	a/ 4-5					
- Wet	a/ 4-5			≥ 3-4	3	2-3
- 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/ staining rubbing to cotton

Remarks:

- In accordance with ISO ILAC-IAF (January 2009) Communicate available on www.pca.gov.pl, laboratory accreditation referring to ISO/IEC 17025:2005 means fulfilling the demands concerning technical laboratory competence and managing system, which are required to ensure technical reliable results of the tests.
- 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.
- Total number of pages of the test certificate 1.

Test authorized by:
Wiesława Lota, M.Sc. Eng.

W. Lota

Number of copies: 4

The test certificate receive:

- Customer – 2 copies
- IW – Laboratory of Chemical Testing and Instrumental Analysis – 1 copy
- IW – Laboratory of Testing Textile Raw Materials and Fabrics – 1 copy

Confirmed by:

LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
KIEROWNIK

mgr inż. Jerzy Piestrzeniewicz

**Laboratory of Chemical Testing
and Instrumental Analysis**

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Łódź 22nd July 2016

L - 286/2016

TEST CERTIFICATE No BCH 260/542/2016/A/1

- Name and address of the principal:** „TOPTEXTIL” Sp. z o.o.
ul. Wadowicka 12, 30 – 415 Kraków
- Name and description of tested sample:** sample of furniture upholstery fabric WINDMILL – declared material composition: 100 % PES
- Date of receiving sample for testing:** 04.07.2016
- Date of performance of testing:** 05.07. – 22.07.2016
- Sampling:** sample in a proper size, in a proper condition for research, supplied by the client

RESULTS OF THE TESTS

Property of investigation	Results		Testing method	Test conditions	Level of requirements for categories according to PN-EN 14465:2005 + A1:2007		
					A	B	C
Colour fastness to: - artificial light ²⁾	a/ a/ a/ a/ a/ a/	7-8 pink 7-8 green 7-8 brown 7-8 light brown 6 grey 6 gold	PN-EN ISO 105-B02:2014- 11 Method 2	Device: Xenotest Alpha + <u>Light conditions:</u> - wavelength: 380-750 nm - filters: 7IR - BST temperature = 47 ± 3 °C - chamber temperature: 45 ± 3 °C - RH = 40% Estimation: Multilight chamber, light D65	≥ 6	≥ 5	≥ 4

²⁾ Colour fastness according to “Blue scale”, indicator “8” means – no change in colour, indicator “1” means – big change in colour
a/ change of colour

Remarks:

- In accordance with ISO ILAC-IAF (January 2009) Communicate available on www.pca.gov.pl, laboratory accreditation referring to ISO/IEC 17025:2005 means fulfilling the demands concerning technical laboratory competence and managing system, which are required to ensure technical reliable results of the tests.
- 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.
- Total number of pages of the test certificate 1.

Test authorized by:
Wiesława Lota, M.Sc. Eng.

W. Lota

Confirmed by:

LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
KIEROWNIK

mgr inż. Jerzy Piastreniewicz

Number of copies: 4

The test certificate receive:

- Customer – 2 copies
- IW – Laboratory of Chemical Testing and Instrumental Analysis – 1 copy
- IW – Laboratory of Testing Textile Raw Materials and Fabrics – 1 copy

Laboratory of Flammability Testing

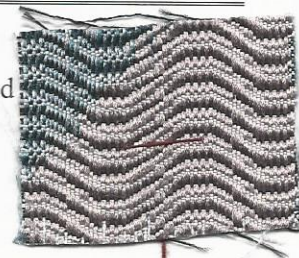
90-520 Łódź, 118 Gdanska Str.
phone 48 42 2534435 (436), fax 48 42 2534490
e-mail: mszejna@iw.lodz.pl

TEST CERTIFICATE ON FLAMMABILITY TESTING OF UPHOLSTERY COMPOSITE**No 256 / BP / 16****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. Wadowicka 12
30-414 Kraków

**Subject of testing:**

Upholstery composite:

- upholstery fabric for furniture named WINDMILL

composition: 100% PES

- CM-3040 polyurethane flame-retardant foam

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

INSTYTUT WŁÓKIENNICTWA
ul. Gdańska 118, 90-520 Łódź
tel. 42 25 34 490, 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:


technician Andrzej Kubacki

Test Certificate authorized by:

Laboratorium Badań Palności Wytwarz
KIEROWNIK


mgr inż. Małgorzata Szejna
10.08.2016

Sample received on: 05.07.2016

Test performed on: 05.08.2016

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.

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

DETAILED TESTING RESULTS

Climate conditions: temperature $(23 \pm 2) ^\circ\text{C}$; humidity $(50 \pm 5) \%$; time 24 h
 Testing conditions: temperature $23 ^\circ\text{C}$; humidity 69 %

Preparation of test samples:

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

Upholstery composite characteristic:

Upholstery composite of:

- upholstery material named WINDMILL,
composition: 100% PES
- CM-3040 polyurethane flame-retardant foam

Criteria		Cigarette			Remarks
		1	2	3	
Smouldering criteria	Unsafe escalating combustion	NO	NO	-	Maximum cigarette smouldering time: 21 minutes 07 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]
					length width depth
					vertical [mm] length width depth
					65 14 10 65 16 7

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

END OF THE TEST CERTIFICATE

WY