

**Laboratorium Badań Surowców
i Wyrobów Włókienniczych**Siedziba: ul. Brzezińska 5/15, 92-103 Łódź, tel. +48(0) 42 6163140
Siedziba: ul. Gdańska 118. 90-520 Łódź. tel. +48(0) 42 2534421

AB 164

LABORATORY OF TESTING TEXTILE RAW MATERIALS AND FABRICS
Testing Laboratory accredited by the Polish Centre for Accreditation**TEST CERTIFICATE NO. BM 2.14.1.4 / 2015 / 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 OUTDOOR 1*, declared raw material composition: 100 % Polyester
3. **Date of receiving material for testing:** 18.09.2015
4. **Date of test performance:** 19.10.2015
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: 20.10.2015**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:

Patrycja Bąk

Person authorizing the Test Certificate:

Name and surname: Halina Królikowska

Function: Head of the Laboratory

Signature:
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
Instytut Włókiennictwa

mgr inż. Halina Królikowska

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TEST CERTIFICATE NO. BM 2.14.1.1 / 2015 / B / A

Parameter	Value	Remarks
Abrasion resistance, number of rubs	4 - 5	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
color change after 3 000 rubs, grade of grey scale	60 000	
1 specimen	60 000	
2 specimen	60 000	
3 specimen	60 000	
4 specimen	60 000	
Total abrasion resistance (the lowest individual result)	60 000	
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

Kierownik
Laboratorium Badań Surowców
i Włókien Włókienniczych
Instytut Włókiennictwa

mgr inż. Halina Królikowska

TEST CERTIFICATE NO. BM 2.14.1.2 / 2015 / 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	5	
	1 000	4 - 5	
	2 000	4 - 5	
		Slight surface fuzzing	
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

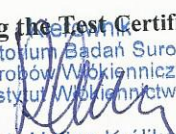
Person authorizing the Test Certificate

Laboratorium Badaw Surowców
i Wyrobów Włókienniczych
Instytut Włókiennictwa
mgr inż. Halina Królowska

TEST CERTIFICATE NO. BM 2.14.1.3 / 2015 / 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	4 4; 4; 4,5; 4; 4,5 3 3; 3; 3; 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
 Laboratorium Badań Surowców
 i Wyrobtów Włókienniczych
 Instytut Włókiennictwa

 mgr inż. Halina Królikowska

Laboratory of Chemical Testing and Instrumental Analysis

Accredited by Polish Center for Accreditation for the testing specified in Scope of Accreditation No AB 077

AB 077

92-103 Łódź, Brzezińska 5/15 Street
phone no. (0-42) 61-63-130 (120, 128), fax (0-42) 61-63-131
e-mail: jpiestrzeniewicz@iw.lodz.pl, labchem@iw.lodz.pl

Łódź 15th October 2015

L - 552/2015

TEST CERTIFICATE No BCH 526/1336/2015/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 OUTDOOR 1 – material composition: 100% Polyester
- Date of receiving sample for testing:** 23.09.2015
- Date of performance of testing:** 05.10. – 15.10.2015
- Sampling:** by Client personally

RESULTS OF THE TESTS

Property of investigation	Results	Testing method	Test conditions
Colour fastness to: - artificial weathering ¹⁾	a/ 5-6	PN-EN ISO 105-B04:1999 Method 2	Device: Xenotest Alpha + <u>Light conditions:</u> - wavelength: 300-400nm - filters: 6IR+IUV - BST temperature = (47±3)°C - chamber temperature: 40 °C - spray – 1min, drying – 29 min <u>Estimation:</u> Multilight chamber, light D65

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

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 Piastrianiewicz

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

TEST CERTIFICATE NO. BM 2.14.1.4 / 2015 / B / A

Parameter	Value	Remarks
The mean of water absorption, %	36,4	PN-EN 29865:1997 conditioned specimen, the flow rate of water: (100 ± 5) ml/min., time of expose to the rain-shower: 10 min, water temperature: $(20 \pm 3)^{\circ}\text{C}$, Assessment water repellency, in grades, after 1 min. from the ending of the rain-shower test; the centrifuge time: 15 s Assessment according to reference photographs: grade 5: Fast runoff of small drops; grade 4: formation of large drops; grade 3: drops adhere to parts of the specimen; grade 2: specimen partly wetted; grade 1: specimen wet through over complete surface;
The mean amount water, which has passed through the specimens, ml	56	
The water repellency, grade	1 specimen wet through over complete surface	

_____ The end of Test Certificate _____

Person authorizing the Test Certificate

Laboratorium Badań Surowców
 i Wyrobów Włóknieniczych
 Instytut Włóknienictwa

mgr inż. Halina Królikowska