IW INSTYTUT WŁÓKIENNICTWA
Textile Research Institute
92-103 ŁÓDŹ, ul. Brzezińska 5/15,
tel. +48(0)42 6163140, 42 6163141, fax.+48(0)42 6792638

UNIA DLA PRZEDSIĘBIORCZYCH
PROGRAM KONKURENCYJNOŚĆ

UNIA EUROPEJSKA

Laboratorium doposażone ze środków
Europejskiego Funduszu Rozwoju Regionalnego

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

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PCA POLSKIE CENTRUM AKREDYTACJI BADANIA

AB 164

LABORATORY OF TESTING TEXTILE RAW MATERIALS AND FABRICS

Testing Laboratory accredited by the Polish Centre for Accreditation

BM-904-483-G/10

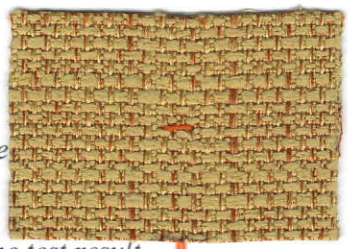
Test Report no. 483.3 / 2010 / G / A

1. **Test ordered by**: „TOPTEXTIL" Sp. z o.o., 30-415 Kraków, 12 Wadowicka Str.
2. **Name and description of tested material**: the sample: the upholstery product **EKWADOR - coordinates,** declared raw material: 100% Polyester
3. **Date of receiving material for testing:** 2010-12-21
4. **Date of test performance:** 2011-01-04÷13
5. **Samples taken by:** the client
6. **Tests carried out according to**: methods presenting in testing table

Results of Laboratory Tests

see page 2/3

Test performed by: Ewa Gontarska M.Sc. Eng



1. *Test results refer only to the tested material.*
2. *Neither of the parts of this report can be copied without written permission of the Head of the Laboratory; it can be copied only as a whole document.*
3. *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 result 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.*

INSTYTUT WŁÓKIENNICTWA
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i Wyrobów Włókienniczych
92-103 Łódź, ul. Brzezińska 5/15
Siedziba Laboratorium:
90-520 Łódź, ul. Gdańska 118

Report date: 2011-01-14
Number of report copies: 4
Test report handed to:
1) TOPTEXTIL Sp. z o.o. - 2 copies,
2) Laboratory for Testing Textile Raw Materials and Fabrics (location: 5/15 Brzezińska str.) - 1 copy,
3) Laboratory for Testing Textile Raw Materials and Fabrics (location: 118 Gdańska str.) - 1 copy.

Report prepared by:
Zofia Mokwińska M.Sc. Eng

Person authorizing the Test Report:
Surname and name: Beata Witkowska, Ph. D.
Function: Technical Head of Laboratory
Signature:

Kierownik Techniczny
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
siedziba: ul Gdańska118
dr inż. Beata Witkowska

- Verte -

Test Report no. 483.3 / 2010 / G /A

Parameter		Value	Remarks
The mean of maximum force, N: **- lengthwise direction** **- crosswise direction** The mean of elongation at maximum force, %: **- lengthwise direction** **- crosswise direction**		 **1 100 ± 0** **1 900 ± 0** **14,5 ± 0,0** **30,0 ± 0,5**	PN-EN ISO 13934-1:2002 tensile tester Instron 3367, pre-tension - 5 N, number of testing specimens for each direction - 5, rate of extension - 100 mm/min, distance between clamps - 200 mm.
Seam slippage resistance, mm: Warp **The mean value of seam slippage resistance for lengthwise direction, mm** - individual results, mm Weft **The mean value of seam slippage resistance for crosswise direction, mm** - individual results, mm		 **2 ± 0** 2; 2; 2; 2; 2 **3 ± 0** 3; 3; 3; 3; 3	PN-EN ISO 13936-2:2005 tensile tester Instron 3367, testing force - 180N, 100% PES sewing threads - tex 79, the number of sewing needle - 110, the number of stitch - 32/100 mm.
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	5	PN-EN ISO 12947-2:2000 +AC:2006 + PN-EN 14465:2005+A1:2007 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.
	1 specimen	40 000	
	2 specimen	40 000	
	3 specimen	35 000	
	4 specimen	35 000	
	Total abrasion resistance (the lowest individual result)	**35 000**	
Criterion of breakdown: flat woven fabric – three threads are completely broken			

The end of the Test Report

Person authorizing the Test Report:

Kierownik Techniczny
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
siedziba: ul. Gdańska 118
dr inż. Beata Witkowska

Opinions and interpretations (see reference [1])

According to standard PN-EN 14465:2005+A1:2007 "Textiles. Upholstery fabrics. Specification and methods of test", **the testing upholstery product EKWADOR - coordinates** was classified:

- **Level A** in reference to the tensile strength (Level A: ≥ 600 N),
- **Level A** in reference to the seam slippage resistance (Level A: ≤ 4 mm),
- **Level A** in reference to the abrasion resistance (Level A: ≥35 000 rubs).

Kierownik Techniczny
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siedziba: ul Gdańska 118
dr inż. Beata Witkowska

[1] Opinions and interpretations are not included in accreditation range.

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PCA POLSKIE CENTRUM AKREDYTACJI BADANIA

AB 164

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

BM-904-36.2-G/13

Test Report no. 36.2.1 / 2013 / G / A

1. **Test ordered by**: **„TOPTEXTIL" Sp. z o.o.,**
   30-415 Kraków, 12 Wadowicka Str.
2. **Name and description of tested material**: the sample: the upholstery fabric **EKWADOR**, declared raw material: 100 % polyester
3. **Date of receiving material for testing:** 2013-03-01
4. **Date of test performance:** 2013-03-05
5. **Samples taken:** correct sample size taken by the Client and delivered in appropriate state for testing
6. **Tests carried out according to**: methods presenting in testing table

Results of Laboratory Tests

see page 2/2

Test performed by: Izabela Jasińska Ph. D.

1. *Test results refer only to the tested material.*
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3. *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 result 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.*

INSTYTUT WŁÓKIENNICTWA
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
92-103 Łódź, ul. Brzezińska 5/15
Siedziba Laboratorium
90-520 Łódź, ul. Gdańska 118

Report date: 2013-03-07
Number of report copies: 4
Test report handed to:

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2) Laboratory for Testing Textile Raw Materials and Fabrics (location: 5/15 Brzezińska str.) - 1 copy,
3) Laboratory for Testing Textile Raw Materials and Fabrics (location: 118 Gdańska str.) - 1 copy.

Report prepared by:

Zofia Mokwińska M.Sc. Eng

Person authorizing the Test Report:

Surname and name: Beata Witkowska, Ph. D.
Function: Technical Head of Laboratory
Signature: Kierownik Techniczny
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
siedziba ul Gdańska118
dr Inż.Beata Witkowska

Test Report no. 36.2.1 / 2013 / G /A

Parameter		Value / degree	Remarks
Propensity to surface fuzzing and pilling, degree	the number of rubs	the abradant - the standard woolen fabric	PN-EN ISO 12945-2:2002 load - 415 g, the number of testing specimens - 3, the number of assessment persons - 3, *Assessment scale:* **5** - without change, **1**- strong fuzzing and intensive pilling on the whole area of sample.
	500	4-5	
	1 000	4-5	
	2 000	**4-5** **light fuzzing**	
	5 000	4 light fuzzing	

According to standard PN-EN 14465:2005+A1:2007 "Textiles. Upholstery fabrics. Specification and methods of test", **the upholstery fabric EKWADOR** was classified as:
- **Level A** in reference to the fuzzing and pilling (Level A: ≥ degree 4-5).

The end of the Test Report

Person authorizing the Test Report:

Kierownik Techniczny
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
siedziba ul Gdańska 118
dr inż. Beata Witkowska

INSTYTUT WŁÓKIENNICTWA
92-103 ŁÓDŹ, ul. Brzezińska 5/15,
tel. +48(0)42 6163101, fax.+48(0)42 6792638
Textile Research Institute

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PCA POLSKIE CENTRUM AKREDYTACJI BADANIA

AB 077

Laboratory of Chemical Testing and Instrumental Analysis

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

92-103 Lodz, 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 6th May 2014

L - 176/2014

TEST REPORT No BCH 167/302/2014/A

1. **Name and address of the principal:** **„TOPTEXTIL" Sp. z o.o.**
   ul. Wadowicka 12
   30 – 415 Kraków
2. **Name and description of tested sample:** furniture upholstery fabric EKWADOR – 100 % polyester
3. **Date of receiving sample for testing:** 30.04.2014
4. **Date of performance of testing:** 30.04. - 06.05.2014
5. **Sampling:** by Client personally

TEST RESULTS

Property of investigation	Results[1)]		Testing method	Test conditions
Colour fastness to rubbing:			PN-EN ISO 105-X12:2005	Rrubbing pick: Ø 16± 0,1mm; push: 9±0,2 N; time of acclimatisation: 4h; temperature of acclimatisation: 19,9°C; ambient temperature: 20,3°C; relative humidity: 65,0%; degree of moisturising of rubbing to fabric: 100%
- *Dry*				
weft	a/	2-3		
warp	a/	2-3		
- *Wet*				
weft	a/	3		
warp	a/	2-3		

[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:
1. 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.
2. Test results refer only to the tested material.
3. Neither of the parts of this report can be copied without written permission of the Head of the Laboratory.
4. Total number of pages of the report 1.

Test authorized by:
Katarzyna Chylewska, M.Sc. Eng.
K. Chylewska

Test verified by:
LABORATORIUM BADAŃ CHEMICZNYCH I ANALIZ INSTRUMENTALNYCH
KIEROWNIK
mgr inż. Jerzy Piestrzeniewicz

Number of copies: 3
The report of the tests receive:
- Client: 2 copies
- IW – Laboratory of Chemical Testing and Instrumental Analysis: 1 copy