

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 152 / 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 ATOS; composition: 2% PU, 69 % PVC, 29% PES,
- 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
BADAN PALNOSCI WYROBÓW
KIEROWNIK
dr inż. Krzysztof Kostanek

Sample received on: 20.05.2024
Test performed on: 04.06.2024
Test Certificate issued on: 05.06.2024

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 22 °C; humidity 38 %

Upholstery composite characteristic:

upholstery composite:

- upholstery fabric named ATOS; composition: 2% PU, 69 % PVC, 29% PES,
- 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	NO	Cigarette 1 fail to smoulder its complete length. It was extinguished after 2 min 43 s.
	Test assembly consumed	NO	NO	NO	
	Smoulders to extremities	NO	NO	NO	
	Smoulders through thickness	NO	NO	NO	Cigarette 2 fail to smoulder its complete length. It was extinguished after 3 min 02 s.
	Smoulders more than 1 hour	NO	NO	NO	
	In final examination, presence of active smouldering	NO	NO	NO	Cigarette 3 fail to smoulder its complete length. It was extinguished after 2 min 55 s.
Flaming criteria	Occurrence of flames	NO	NO	NO	

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

END OF THE TEST CERTIFICATE

**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, alisiak@iw.lodz.pl

AB 077

Lodz, 10th October 2018

L-435/2018

TEST CERTIFICATE no. BCH 407/945/2018/A/1

- 1. Name and address of the principal:** „TOPTEXTIL” Sp. z o.o.
12 Wadowicka Str., 30-415 Krakow
- 2. Subject of study:** sample no. 3: furniture upholstery product ATOS, declared material composition: 30 % polyester, 70 % polyvinyl chloride
- 3. Date of receiving sample for testing:** 17th September 2018
- 4. Date of the tests conducting:** 08th-10th October 2018
- 5. Sampling:** sample in a proper size, in a proper condition for research, supplied by the Customer

RESULTS OF THE TESTS

Tested feature	Results of the test [degree]	Reference document	Technical specifications	Level of requirements for categories according to PN-EN 14465:2005 + A1:2007		
				A	B	C
Colour fastness to: - dry rubbing: ¹⁾		PN-EN ISO 105- X12:2016-08	temperature of acclimatisation: 20 ± 2 °C relative humidity: 65 ± 2 % time of acclimatisation: 4 h rubbing pick: Ø 16 ± 0,1 mm push: 9 ± 0,2 N degree of moisturising of fabric to rubbing: 100 %	≥ 4-5	≥ 4	≥ 3-4
weft	a/ 4-5					
warp	a/ 4-5					
- wet rubbing: ¹⁾				≥ 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 and in staining adjacent fabric, indicator “1” means – big change in colour
a/ staining - the cotton rubbing fabric

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.

Tests authorized by:

LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
ZASTĘPCA KIEROWNIKA

mgr inż. Agnieszka Alisiak-Kucińska

Confirmed by:
LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
KIEROWNIK

mgr inż. Jerzy Piestrzeniewicz

Number of copies: 3

The test certificate receive:

- Customer - 1 copies
- IW Laboratory of Testing Textile Raw Materials and Fabrics - 1 copy

**Laboratory of Chemical Testing
and Instrumental Analysis**

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Lodz, 10th October 2018

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| 2. Subject of study: | sample no. 3: furniture upholstery product ATOS, declared material composition: 30 % polyester, 70 % polyvinyl chloride |
| 3. Date of receiving sample for testing: | 17 th September 2018 |
| 4. Date of the tests conducting: | 18 th -28 th September 2018 |
| 5. Sampling: | sample in a proper size, in a proper condition for research, supplied by the Customer |

RESULTS OF THE TESTS

Tested feature	Results of the test [degree]	Reference document	Technical specifications	Level of requirements for categories according to PN-EN 14465:2005 + A1:2007		
				A	B	C
Colour fastness to: - artificial light ¹⁾	a/ 7	PN-EN ISO 105-B02:2014-11 Method 2	device: Xenotest Alpha LM 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 of colour

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weft							
warp	a/	4-5			≥ 3-4	≥ 3	≥ 2-3
- wet rubbing: ¹⁾							
weft	a/	4-5	≥ 3-4	≥ 3	≥ 2-3		
warp							

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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:

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Tests authorized by:

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ZASTĘPCA KIEROWNIKA

mgr inż. Agnieszka Alisiak-Kucińska

Confirmed by:

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I ANALIZ INSTRUMENTALNYCH
KIEROWNIK

mgr inż. Jerzy Piastreniewicz

Number of copies: 3

The test certificate receive:

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- IW Laboratory of Testing Textile Raw Materials and Fabrics - 1 copy

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

92-103 Lodz, 5/15 Brzezinska Str., phone 48 42 6163142, fax 48 42 6792638
90-520 Lodz, 118 Gdanska Str., phone 48 42 2534419, fax 48 42 2534490
e-mail: bwitkowska@iw.lodz.pl, jandrysiak@iw.lodz.pl

TEST CERTIFICATE NO. BM 12.10.3.1 / 2018 / B

1. **Test ordered by:** „TOPTEXTIL” Sp. z o.o., 12 Wadowicka Street, 30-415 Kraków
2. **Name and description of tested material:** the sample: **the upholstery product ATOS, declared raw material composition: 30% Polyester, 70% Polyvinyl chloride.**
3. **Date of receiving material for testing:** 2018-09-07
4. **Date of test performance:** 2018-10-11
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. *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: 2018-10-22

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:

Function:

Signature

Zastępca Kierownika
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
Instytut Włókiennictwa

mgr inż. Jerzy Andrysiak

TEST CERTIFICATE NO. BM 12.10.3.1 / 2018 / 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	<p align="center">3</p> 3; 4; 3,5; 3,5; 3 <p align="center">3</p> 3; 2,5; 3; 3; 2,5	PN-EN ISO 13936-2:2005 the conditioned sample 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

_____ **The end of Test Certificate** _____

Person authorizing the Test Certificate

Zastępca Kierownika
 Laboratorium Badań Surowców
 i Wyrobów Włókienniczych
 Instytut Włókiennictwa
 mgr inż. Jerzy Andrysiak

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

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90-520 Lodz, 118 Gdanska Str., phone 48 42 2534419, fax 48 42 2534490
e-mail: bwitkowska@iw.lodz.pl, jandrysiak@iw.lodz.pl

TEST CERTIFICATE NO. BM 12.10.3.2 / 2018 / B

1. **Test ordered by:** „TOPTEXTIL” Sp. z o.o., 12 Wadowicka Street, 30-415 Kraków
2. **Name and description of tested material:** the sample: **the upholstery product ATOS, declared raw material composition: 30% Polyester, 70% Polyvinyl chloride.**
3. **Date of receiving material for testing:** 2018-09-07
4. **Date of test performance:** 2018-10-10 ÷ 15
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. *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: 2018-10-22

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:

Function:

Signature

Zastępca Kierownika
Laboratorium Badań Surowców
i Wytrobów Włókienniczych
Instytut Włókiennictwa

mgr inż. Jerzy Andrysiak

TEST CERTIFICATE NO. BM 12.10.3.2 / 2018 / B

Parameter		Value	Remarks
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	5	PN-EN ISO 12947-2:2017-02 + PN-EN 14465:2005+A1:2007, Annex A the conditioned sample, the abradant: the standard woolen fabric, the nominal pressure used in the test: 12 kPa, magnification factor in the magnifying device: 8. NOTE: Brightening. The outer layer of the product is not disturbed.
	1 specimen	> 100 000 no destruction	
	2 specimen	> 100 000 no destruction	
	3 specimen	> 100 000 no destruction	
	4 specimen	> 100 000 no destruction	
Total abrasion resistance (the lowest individual result)		> 100 000 no destruction	

_____ **The end of Test Certificate** _____

Person authorizing the Test Certificate

Zastępca Kierownika
Laboratorium Badań Surowców
i Wyrobów Włókienniczych
Instytut Włókiennictwa
mgr inż. Jerzy Andrysiak

Laboratory of Testing
Textile Raw Materials and Fabrics

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e-mail: bwitkowska@iw.lodz.pl, jandrysiak@iw.lodz.pl

TEST CERTIFICATE NO. BM 12.10.3.3 / 2018 / B

1. **Test ordered by:** „TOPTEXTIL” Sp. z o.o., 12 Wadowicka Street, 30-415 Kraków
2. **Name and description of tested material:** the sample: **the upholstery product ATOS, declared raw material composition: 30% Polyester, 70% Polyvinyl chloride.**
3. **Date of receiving material for testing:** 2018-09-07
4. **Date of test performance:** 2018-10-12
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.*
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3. *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: 2018-10-22

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:

Function:

Signature

Zastępca Kierownika
Laboratorium Badań Surowców
i Wytrobów Włókienniczych
Instytut Włókiennictwa

mgr inż. Jerzy Andrysiak

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

TEST CERTIFICATE NO. BM 12.10.3.3 / 2018 / B

Parameter		Value	Remarks
The mean of maximum force, N	longitudinal direction	380	PN-EN ISO 13934-1:2013-07 conditioned sample, tensile machine: Tinius Olsen H50KS rate of extension: 100 mm/min; distance between clamps: 200 mm
	cross direction	260	
The elongation at maximum force, %	longitudinal direction	59,5	
	cross direction	141	

_____ The end of Test Certificate _____

Person authorizing the Test Certificate

Zastępca Kierownika
Laboratorium Badań Surowców
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TEST CERTIFICATE NO. BM 12.10.3.4 / 2018 / B

1. **Test ordered by:** „TOPTEXTIL” Sp. z o.o., 12 Wadowicka Street, 30-415 Kraków
2. **Name and description of tested material:** the sample: **the upholstery product ATOS, declared raw material composition: 30% Polyester, 70% Polyvinyl chloride.**
3. **Date of receiving material for testing:** 2018-09-07
4. **Date of test performance:** 2018-10-10
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: Danuta Ławniczak

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Certificate prepared by:

Patrycja Bąk

Person authorizing the Test Certificate

Name and surname:

Function:

Signature

Zastępca Kierownika
Laboratorium Badań Surowców
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Instytut Włókiennictwa

mgr inż. Jerzy Andrysiak

TEST CERTIFICATE NO. BM 12.10.3.4 / 2018 / B

Parameter	Value	Remarks
The mean of tear force, N	longitudinal direction	28
	cross direction	34
		PN-EN ISO 13937-3:2002 conditioned sample, tensile machine: Zwick 1120; rate of extension: 100 mm/min; distance between clamps: 100 mm width of test specimen: 50 mm

_____ The end of Test Certificate _____

Person authorizing the Test Certificate

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Instytut Włókiennictwa

mgr inż. Jerzy Andrysiak