

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

Lodz, 30th August 2018

L-377/2018

TEST CERTIFICATE no. BCH 350/820/2018/A

- | | |
|---|---|
| 1. Name and address of the principal: | „TOPTEXTIL” Sp. z o.o.
12 Wadowicka Str., 30-415 Krakow |
| 2. Subject of study: | sample no. 2 – furniture upholstery fabric FRODO, declared material composition: 59 % polyester, 41 % polypropylene |
| 3. Date of receiving sample for testing: | 10 th August 2018 |
| 4. Date of the tests conducting: | 14 th -28 th August 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/ 6	PN-EN ISO 105-B02:2014-11 Method 2	device: Xenotest Alpha + light conditions: A1 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

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
KIEROWNIK TECHNICZNY
ds. Badań Chemicznych i Odporności Wyrobów

K. Chylewska
mgr inż. Katarzyna Chylewska

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
- IW Laboratory of Chemical Testing and Instrumental Analysis - 1 copy

**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

AB 077

Lodz, 30th August 2018

L-377/2018

TEST CERTIFICATE no. BCH 350/820/2018/A

- 1. Name and address of the principal:** „TOPTEXTIL” Sp. z o.o.
12 Wadowicka Str., 30-415 Krakow
- 2. Subject of study:** sample no. 2 – furniture upholstery fabric FRODO, declared material composition: 59 % polyester, 41 % polypropylene
- 3. Date of receiving sample for testing:** 10th August 2018
- 4. Date of the tests conducting:** 14th-20th August 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⁾							
weft	a/	4-5	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
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:

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 test certificate can be copied without written permission of the Head of the Laboratory.
4. Total number of pages of the test certificate: 1.

Tests authorized by:
LABORATORIUM BADAŃ CHEMICZNYCH
I ANALIZ INSTRUMENTALNYCH
KIEROWNIK TECHNICZNY
ds. Badań Chemicznych i Odporności Wybarwień

K. Chylewska
mgr inż. Katarzyna Chylewska

Number of copies: 3

The test certificate receive:

- Customer - 1 copies
- 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 TESTING TEXTILE RAW MATERIALS AND FABRICS
Testing Laboratory accredited by the Polish Centre for Accreditation

TEST CERTIFICATE NO. BM 12.9.2.1 / 2018 / B / A

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 fabric FRODO, declared raw material composition: 57% Polyester, 41% Polypropylen**
3. **Date of receiving material for testing:** 2018-08-08
4. **Date of test performance:** 2018-08-30
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



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: 2018-08-31

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

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

TEST CERTIFICATE NO. BM 12.9.2.1 / 2018 / B / A

Parameter	Value	Remarks
Seam slippage resistance, mm: <u>Warp</u> The mean value of seam slippage resistance for warp direction, mm - individual results, mm <u>Weft</u> The mean value of seam slippage resistance for weft direction, mm - individual results, mm	3 3; 3; 3; 3,5; 3,5 3 3; 2,5; 2; 3; 3	PN-EN ISO 13936-2:2005 the conditioned sample, tensile machine: 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**

_____ The end of Test Certificate _____

Person authorizing the Test Certificate

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

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

TEST CERTIFICATE NO. BM 12.9.2.2 / 2018 / B / A

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 fabric FRODO, declared raw material composition: 59% Polyester, 41% Polypropylen**
3. **Date of receiving material for testing:** 2018-08-08
4. **Date of test performance:** 2018-08-24÷31
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: 2018-08-31

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

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

TEST CERTIFICATE NO. BM 12.9.2.2 / 2018 / B / A

Parameter		Value	Remarks
Abrasion resistance, number of rubs	color change after 3 000 rubs, grade of grey scale	4 - 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. <u>Criterion of destruction of the testing specimens in accordance with that standard:</u> flat woven fabric – three threads are completely broken
	1 specimen	90 000	
	2 specimen	90 000	
	3 specimen	90 000	
	4 specimen	100 000	
	Total abrasion resistance (the lowest individual result)	90 000	

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 ÷ 20 000, **C category: number of rubs: 4 000 ÷ 10 000**

_____ **The end of Test Certificate** _____

Person authorizing the Test Certificate

Zastępca Kierownika
Laboratorium Badań Surowców
i Wytrobów Włókienniczych
Instytut Włókiennictwa

mgr inż. Jerzy Andrysiak

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

TEST CERTIFICATE NO. BM 12.9.2.3 / 2018 / B / A

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 fabric FRODO, declared raw material composition: 59% Polyester, 41% Polypropylen**
3. **Date of receiving material for testing:** 2018-08-08
4. **Date of test performance:** 2018-08-23
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: 2018-08-31

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 Wyrzobów Włókienniczych
Instytut Włókiennictwa

mgr inż. Jerzy Andrysiak

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

TEST CERTIFICATE NO. BM 12.9.2.3 / 2018 / B / A

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

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

TEST CERTIFICATE ON FLAMMABILITY TESTING OF UPHOLSTERY COMPOSITE

No 354 / BP / 18

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
30-415 Kraków

Subject of testing:

Upholstery composite:
- upholstery fabric named FRODO, composition: 59% Polyester, 41% Polypropylene.
- T-3037 polyurethane foam, self-extinguished
Testing sample with the correct size, in appropriate state for testing,
supplied by the Orderer with its characteristic and without the Sampling Protocol.

INSTITUT WŁÓKIENNICZY
LABORATORIUM
BADAŃ PALNOŚCI WYROBÓW
ul. Gdańska 118, 90-520 Łódź

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:

Andrzej Kubacki
technician Andrzej Kubacki

Test Certificate authorized by

Laboratorium Badań Palności WYROBÓW
KIEROWNIK

mgr inż. Małgorzata Szejna
12.09.2018

Sample received on: 10.08.2018
Test performed on: 11.09.2018

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.

DETAILED TESTING RESULTSClimate conditions: temperature $(23 \pm 2) ^\circ\text{C}$; humidity $(50 \pm 5) \%$; time 24 hTesting conditions: temperature $22 ^\circ\text{C}$; humidity 49 %**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:

- upholstery fabric named FRODO, composition: 59% Polyester, 41% Polypropylene.
- T-3037 polyurethane foam, self-extinguished

Criteria		Cigarette			Remarks					
		1	2	3						
Smouldering criteria	Unsafe escalating combustion	NO	NO	-	Maximum cigarette smouldering time: 20 minutes 09 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]			vertical [mm]		
					length	width	depth	length	width	depth
					62	16	18	58	18	9

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

END OF THE TEST CERTIFICATE

W

TEST CERTIFICATE ON FLAMMABILITY TESTING OF UPHOLSTERY COMPOSITE

No 354 / BP / 18

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
30-415 Kraków

Subject of testing:

Upholstery composite:
- upholstery fabric named FRODO, composition: 59% Polyester, 41% Polypropylene.
- T-3037 polyurethane foam, self-extinguished
Testing sample with the correct size, in appropriate state for testing,
supplied by the Orderer with its characteristic and without the Sampling Protocol.

INSTYTUT WŁOCIENICTWA
LABORATORIUM
BADAŃ PALNOŚCI WYROBÓW
ul. Gdańska 118, 90-520 Łódź

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 WYROBÓW
KIEROWNIK

mgr Inż. Małgorzata Szejna

Sample received on: 10.08.2018
Test performed on: 11.09.2018

12.09.2018

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.

DETAILED TESTING RESULTSClimate conditions: temperature (23 ± 2) °C; humidity (50 ± 5) %; time 24 h

Testing conditions: temperature 22 °C; humidity 49 %

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:

- upholstery fabric named FRODO, composition: 59% Polyester, 41% Polypropylene.
- T-3037 polyurethane foam, self-extinguished

Criteria		Cigarette			Remarks
		1	2	3	
Smouldering criteria	Unsafe escalating combustion	NO	NO	-	Maximum cigarette smouldering time: 20 minutes 09 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]
					vertical [mm]
					length width depth length width depth
					62 16 18 58 18 9

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

END OF THE TEST CERTIFICATE

by