

2024EP4377

TEST REPORT

DATE OF RECEPTION

Date Format: dd/MM/yyyy 11/10/2024

DATE OF TESTS

Starting : 17/10/2024

Ending: 28/10/2024

APPLICANT

XM TEXTILES POLSKA SP. Z O. O.

16 WOLNOŚCIOWA

PL-95-200 Pabianice

Poland

Att Irina Danilova

REFERENCE OF SAMPLES

Reference by AITEX	Reference by customer	AITEX sample description
2024EP4377-S01	UNITEC-240	Fabric

TESTS CARRIED OUT

- PRE-TREATMENT FOR DOMESTIC WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING
- COLOUR FASTNESS TO DRY CLEANING
- COLOUR FASTNESS TO HOT PRESSING
- DETERMINATION OF COORDINATES (x,y,Y)

Tests marked with * are not included within the scope of the accreditation.





DESCRIPTION OF SAMPLES



Reference by AITEX: 2024EP4377-S01

Reference by customer:

UNITEC-240

Information supplied by the customer

Composition and percentage 65% Polyester/35% Cotton, , Twill 2/1
Weight 240gsm
Color HV Orange
Others (if any) 637

Composition provided by the customer:

65% Polyester/35% Cotton,

AITEX Subsamples	Subsample Description
2024EP4377-S01_P1	FABRIC AFTER WASH 25 CYCLES



EXECUTIVE SUMMARY

	Reference	Test/Standard	Result
EN ISO 20471:2013+EN ISO 20471:2013+AMD1: 2016	2024EP4377-S01	COLOUR FASTNESS TO DRY CLEANING EN ISO 105-D01:2010	PASS
		COLOUR FASTNESS TO HOT PRESSING EN ISO 105-X11:1996	PASS
		DETERMINATION OF COORDINATES (x,y,Y) ISO 105-J01:1997	PASS
	2024EP4377-S01_P1	COLOUR FASTNESS TO DRY CLEANING EN ISO 105-D01:2010	PASS
		COLOUR FASTNESS TO HOT PRESSING EN ISO 105-X11:1996	PASS
		DETERMINATION OF COORDINATES (x,y,Y) ISO 105-J01:1997	PASS



REQUIREMENT SUMMARY

COLOUR FASTNESS TO DRY CLEANING

REQUIREMENT ACCORDING EN ISO 20471:2013+EN ISO 20471:2013+AMD1:2016

The limit set to Standard, for testing of colour fastness to dry cleaning, is 4 for degradation and 4 for staining.

COLOUR FASTNESS TO HOT PRESSING

REQUIREMENT ACCORDING EN ISO 20471:2013+EN ISO 20471:2013+AMD1:2016

The limit set to Standard for testing of colour fastness to ironing, is 4-5 for degradation and 4 for staining.
Condition dry/dry

DETERMINATION OF COORDINATES (x,y,Y)

REQUIREMENT ACCORDING EN ISO 20471:2013+EN ISO 20471:2013+AMD1:2016

The chromatic coordinates must be situated within the area defined by the coordinates specified in the Standard EN ISO 20471:2013+EN ISO 20471:2013+AMD1:2016 and the luminance factor shall exceed according to:

Colour	Minimum luminance factor
Yellow	0.70
Orange	0.40
Red	0.25

MEANING OF COLOUR FASTNESS APPRAISAL EVALUATED WITH GREY SCALE

VALUE	MEANING
5	VERY GOOD - EXCELLENT
4	GOOD
3	FAIR - MODERATE
2	POOR - BEHAVIOUR
1	VERY POOR

According to standards ISO 105-A02 e ISO 105-A03



RESULTS

PRE-TREATMENT FOR DOMESTIC WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING

Standard

EN ISO 6330:2021

Test date

Start date

17/10/2024

End date

22/10/2024

Washing procedure

6N

Washing temperature

60°C

Washing cycles

25

Dryer type

James Heal

Drying procedure

F (type A1 tumble drying)

Drying temperature

70°C

Washing powder

Reference detergent 3

Reference

2024EP4377-S01

Units	Dry mass of the samples(Kg)	Counterweight mass(Kg)	Counterweight type	Equipment
1	0.03	1.8	Type III	WASCATOR

Reference	Description
2024EP4377-S01	UNITEC-240



RESULTS

COLOUR FASTNESS TO DRY CLEANING

Standard

EN ISO 105-D01:2010

Equipment

Gyrowash

Test date

Start date 21/10/2024 End date 28/10/2024

Reference

2024EP4377-S01

Change in colour	Staining	
5	Cotton 4-5	Polyester 4-5

Reference

2024EP4377-S01_P1

Change in colour	Staining	
5	Cotton 5	Polyester 5

Reference	Description
2024EP4377-S01	UNITEC-240
2024EP4377-S01_P1	FABRIC AFTER WASH 25 CYCLES



RESULTS

COLOUR FASTNESS TO HOT PRESSING

Standard

EN ISO 105-X11:1996

Equipment

Fixotest

Test date

Start date 28/10/2024 **End date** 28/10/2024

Temperature

(150)°C

2024EP4377-S01	Immediate appraisal after testing		
		Change in colour	
	Dry	5	
	Appraisal after 4 hours conditions		
		Change in colour	Staining
	Dry	5	5
2024EP4377-S01_P1	Immediate appraisal after testing		
		Change in colour	
	Dry	5	
	Appraisal after 4 hours conditions		
		Change in colour	Staining
	Dry	5	5

Reference	Description
2024EP4377-S01	UNITEC-240
2024EP4377-S01_P1	FABRIC AFTER WASH 25 CYCLES



RESULTS

DETERMINATION OF COORDINATES (x,y,Y)

Standard

ISO 105-J01:1997

Equipment

Konica Minolta ((0921E06) 400nm-700nm)

Test date

Start date	17/10/2024	End date	24/10/2024
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Conditioned date

Start date	17/10/2024	End date	24/10/2024
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Atmosphere for conditioning

Temperature	(20 ± 2) °C	Relative Humidity	(65 ± 5) %
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Illuminant

D65

Observant

2°

Measuring geometry

45/0

Specular component and UV filter

Excluded

Observation area

Small

Number of measurements

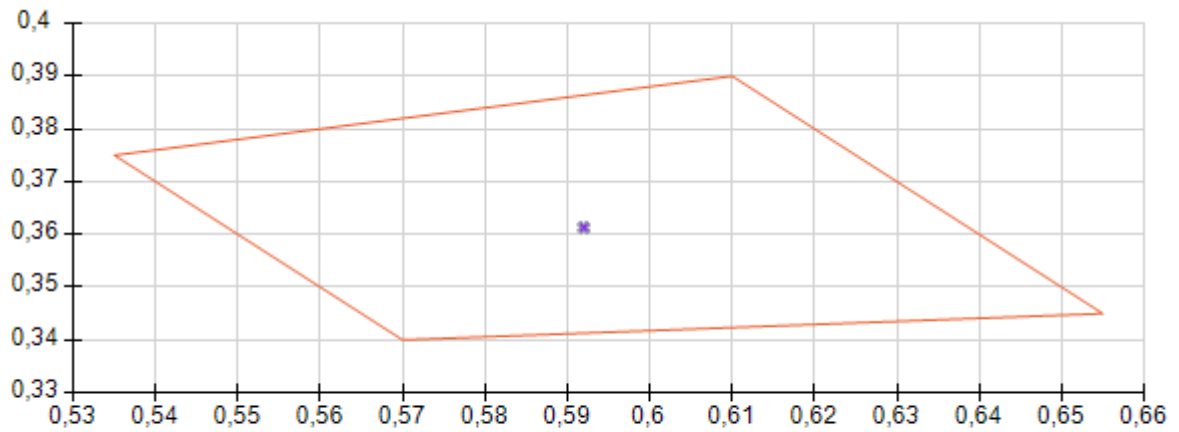
5



Reference

2024EP4377-S01

	x	y	Y minimum
◆Coordinate 1	0,61	0,390	0,40
◆Coordinate 2	0,535	0,375	
◆Coordinate 3	0,570	0,340	
◆Coordinate 4	0,655	0,345	
Original	0,592	0,361	0,41
Uncertainty	± 0.4 %	± 0.5 %	± 1 %



✱ Original

Reference	Description
2024EP4377-S01	UNITEC-240



RESULTS

DETERMINATION OF COORDINATES (x,y,Y)

Standard

ISO 105-J01:1997

Equipment

Konica Minolta ((0921E06) 400nm-700nm)

Test date

Start date	23/10/2024	End date	24/10/2024
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Conditioned date

Start date	23/10/2024	End date	24/10/2024
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Atmosphere for conditioning

Temperature	(20 ± 2) °C	Relative Humidity	(65 ± 5) %
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Illuminant

D65

Observant

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Measuring geometry

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Number of measurements

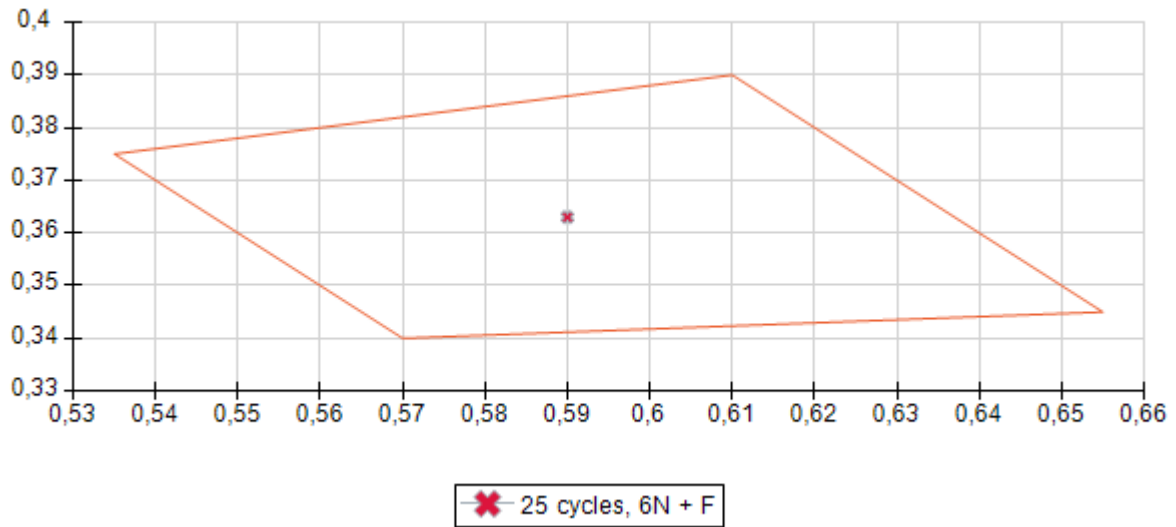
5



Reference

2024EP4377-S01_P1

	x	y	Y minimum
◆Coordinate 1	0,61	0,390	0,40
◆Coordinate 2	0,535	0,375	
◆Coordinate 3	0,570	0,340	
◆Coordinate 4	0,655	0,345	
After 25 washing cycles 6N + F	0,590	0,363	0,42
Uncertainty	± 0.4 %	± 0.5 %	± 1 %



Reference	Description
2024EP4377-S01_P1	FABRIC AFTER WASH 25 CYCLES



Lucia Martinez
Head of PPE and Ballistics department



Date: 29/10/2024 8:59:21

Digitally Signed by: MARIA ISABEL SORIANO SARRIO -

NIF: 52716426N

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