


Unitec-200

65% POLYESTER / 35% COTTON

200 GSM / TWILL 3/1



Fabric name	Unitec-200
Fabric weight	200 ± 5 gsm
Composition	65% Polyester, 35% Cotton
Full width	150 ± 2 cm
Weave	twill 3/1
Finishes	—
Area of use	men's and women's workwear and uniform
Washing instruction	

Physical properties*

			warp	weft
1	Tensile strength, N	ISO 13934-1:2013	1200	550
2	Tearing strength, N	ISO 13937-3:2000	30	30
3	Dimensional Stability To Washing, max.	ISO 6330:2000	3.0%	3.0%
4	Abrasion Resistance	ISO 12947-2:2002	> 20 000	
5	Pilling Resistance (after 1000 rev.)	ISO 12945-2:2000	4	
6	Colour Fastness To Washing (cotton+polyester) 60°C, min.	ISO 105-C06:2010		
	Colour change	ISO 105-C06:2010	4-5	
	Colour staining	ISO 105-C06:2010	3-4	
7	Colour Fastness To Perspiration, min.	ISO 105-E04:2013		
	Colour change		4-5	
	Colour staining		4-5	
8	Colour Fastness To Rubbing, min.	ISO 105-X12:2001		
	Dry		3-4	
	Wet		2-3	
9	Colour Fastness To Light	ISO 105-B02:2013	> 4	

* The values shown are indicative and may vary slightly from batch to batch.

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2022EP6256

TEST REPORT

DATE OF RECEPTION

Date Format: dd/MM/yyyy 25/02/2022

DATE OF TESTS

Starting : 02/03/2022

Ending: 17/03/2022

APPLICANT

XM Textiles Europe UAB

Darius ir Gireno st. 42A Office 509

LT-02189 Vilnius

Att CERTIFICATION TEAM

REFERENCE OF SAMPLES

Reference by AITEX	Reference provided by the customer	Sample description
2022EP6256-S01	Fabric ref. UNITEC-200	Fabric

TESTS CARRIED OUT

- PRE-TREATMENT FOR INDUSTRIAL WASHING AND DRYING PROCEDURES FOR TEXTILE TESTING
- DETERMINATION OF CANCEROGENIC ARYLAMINES
- DETERMINATION THE pH VALUE OF AQUEOUS EXTRACT
- DETERMINATION OF BREAKING STRENGTH AND ELONGATION
- DETERMINATION OF TEAR RESISTANCE
- DETERMINATION OF DIMENSIONAL CHANGE IN WASHING AND DRYING
- FORMALDEHYDE

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

**DESCRIPTION OF SAMPLES**

Reference by AITEX: 2022EP6256-S01

Reference provided by the customer:

Fabric ref. UNITEC-200

Sample description:

Fabric ref. UNITEC-200

Composition and percentage 65% Polyester, 35% Cotton, , Twill 3/1

Weight 200gsm

Color White

Others (if any) XMT-21-144-ZHJ

Reference by AITEX	Reference provided by the customer
2022EP6256-S01.1	Fabric ref. UNITEC-200 AFTER WASH

The client has provided AITEX all the technical information about the articles to certify. All this information is enclosed in the Application Form



RESULTS

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

Standard

EN ISO 15797:2018

Washing procedure

Table 4, procedure 1

Washing cycles

1

Washing temperature

85°C

Driying procedure

A (tumble dryer) - Industrial dryer 13010I12

Driying temperature

70°C

Reference

2022EP6256-S01

Test date

Start date

03/03/2022

End date

04/03/2022

Dry mass of the samples (Kg)	Counterweight mass (Kg)	Counterweight type	Equipment
0.35	12.1	COTTON / POLYESTER	LAVADORA INDUSTRIAL 4 13535I05



RESULTS

DETERMINATION OF CANCEROGENIC ARYLAMINES

Standard

EN 14362-1:2017

Detection System according to

Gas Chromatograph 7890A

Testing Method

GC/MSD

Uncertainty

± 9 mg/Kg

Reference	Result (mg/Kg)
2022EP6256-S01	< 30

¹ Arylamines tested

Substance		
4-Aminobiphenyl	3,3'-Dimethylbenzidine	2,4-Diaminoanisole
Benzidine	3,3'-Dimethyl-4,4'-diaminodiphenylmethane	o-Anisidine
4-Chlor-o-toluidine	p-Cresidine	3,3'-Dichlorobenzidine
2-Naphthylamine	4,4'-Methylene-bis-2-chloraniline	2,4,5-Trimethylaniline
o-Aminoazotoluene	4,4'-Oxydianiline	4,4'-Diaminodiphenylmethane
2-Amino-4-nitrotoluene	4,4'-Thiodianiline	2,4- Toluylendiamine
p-Chloraniline	o-Toluidine	
3,3'-Dimethoxybenzidine	4-Aminoazobenzene	



RESULTS

DETERMINATION THE pH VALUE OF AQUEOUS EXTRACT

Standard

EN ISO 3071:2020

Determination date

03/03/2022

Extractor solution

KCl

pH Extractor solution

5.6

Temperature

(21)°C

Reference	pH	Uncertainty
2022EP6256-S01	4.20	±5%



RESULTS

DETERMINATION OF BREAKING STRENGTH AND ELONGATION

Standard

EN ISO 13934-1:2013

Equipment

INSTRON Dynamometer

Conditioned date
Start date 7/3/2022 **End date** 10/3/2022

Test date
Start date 07/03/2022 **End date** 10/03/2022

Gauge length
Warp:200 mm

Weft:200 mm

Pretension
Warp:5.0 N

Weft:5.0 N

Gauge speed
Warp:100 mm/min

Weft :100 mm/min

Atmosphere for conditioning
Temperature $(20 \pm 2) ^\circ\text{C}$ **Relative Humidity** $(65 \pm 4) \%$
Number of test specimens per material to be tested
Tested 5 **Rejected** 0

State of the specimens

Conditioned

Reference

2022EP6256-S01.1

Direction	Maximum force (N)	Medium strength	C.V.	Elongation to the maximum load(%)	Average elongation	C.V.
Warp	1600	1600	1.5	18.5	18	3.2
	1700			18.5		
	1600			18		
	1600			18		
	1700			17		
Weft	700	710	2.9	16	16.5	1.3
	730			16.5		
	700			16.5		
	710			16.5		
	740			16.5		

Uncertainty
 $\pm 5\%$ assay value of the measured



RESULTS

DETERMINATION OF TEAR RESISTANCE

Standard

EN ISO 13937-2:2000

Equipment

INSTRON Dynamometer

Test date
Start date 07/03/2022 **End date** 10/03/2022

Conditioned date
Start date 7/3/2022 **End date** 10/3/2022

Atmosphere for conditioning
Temperature $(20 \pm 2) ^\circ\text{C}$ **Relative Humidity** $(65 \pm 4) \%$
Number of test specimens per material to be tested
Tested 5 **Rejected** 0

Reference

2022EP6256-S01.1

Tear	Specimen	Average load	Classification value (N)	C.V.	
Lengthwise	32.5	33	25.9	2.8	
	32.5				
	32.3				
	33.5				
	34.4				
Crosswise	27.4	27		25.9	2.2
	26.4				
	26.9				
	26.5				
	25.9				

Uncertainty
 $\pm 3.9\%$ assay value of the measured



RESULTS

DETERMINATION OF DIMENSIONAL CHANGE IN WASHING AND DRYING

Standard

EN ISO 5077:2008

Preparation, marking and measuring of fabric specimens according to EN ISO 3759:2011

Start date 10/3/2022 **End date** 17/03/2022

Equipment

Washing machine (13535105)

Washing cycles

5

Washing temperature

85°C

Driying procedure

A (tumble dryer) - Industrial dryer 13010I12

Driying temperature

70°C

Uncertainty

± 0.4 %

Reference

2022EP6256-S01.1

Specimen	Direction	Dimensional change (%)	Direction	Average result - Dimensional change (%)
1	WARP	-3	WARP	-3
	WEFT	-1		
-	-	---	WEFT	-1
	-	---		

Note

Positive dimensional change indicates lengthening. Negative dimensional change indicates shrinkage



RESULTS

FORMALDEHYDE

Standard

EN ISO 14184-1:2011

Test date**Start date**

04/03/2022

End date

04/03/2022

Application range of the calibration straight line

15-600 mg/Kg

Reference	Formaldehyde (mg/Kg)	Uncertainty
2022EP6256-S01	5	± 11%



Lucia Martinez
Head of PPE and Ballistics department

Date: 21/03/2022 17:12:27

Digitally Signed by: LUCIA MARTINEZ MOLTO -

NIF:21651425F

Liability clauses

- 1-AITEX is liable only for the results of the methods of analysis used, as expressed in the report and referring exclusively to the materials or samples indicated in the same which are in its possession, the professional and legal liability of the Centre being limited to these. Unless otherwise stated, the samples were freely chosen and sent by the applicant.
- 2-AITEX shall not be liable in any case of misuse of the test materials nor for undue interpretation or use of this document.
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- 10-The original materials and rests of samples, not subject to test, will be retained in AITEX during the twelve months following the issuance of the report, so that any check or claim which, in his case, wanted to make the applicant, should be exercised within the period indicated.
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- 12-This report may only be sent or delivered by hand to the applicant or to a person duly authorised by the same.
- 13-The results of the tests and the statement of compliance with the specification in this report refer only to the test sample as it has been analyzed / tested and not the sample / item which has taken the test sample.
- 14-The client must attend at all times, to the dates of the realization of the tests.
- 15-According to Resolution EA (33) 31, the test reports must include the unique identification of the sample, and any brand or label of the manufacturer may be added. It is not allowed to re-issue test reports of untested sample names (references), they can only be re-issued for error correction or inclusion of omitted data that were already available at the time of the test. The laboratory can not assume responsibility for declaring that the product with the new trade name / trademark is strictly identical to the one originally tested; This responsibility belongs to the client.
- 16-This report may not be partially reproduced without the written approval of the issuing laboratory.
- 17-AITEX laboratories do not carry out sampling, so that the results of the test reports are applicable to the sample as it was received.



Certificate

OEKO-TEX® STANDARD 100

SHANGHAI XM GROUP LTD.

is granted the OEKO-TEX® STANDARD 100 certification
and the right to use the trademark.

SCOPE

Woven fabrics made of 100% CO, CO/PES, CO/CF, CO/PES/CF, CO/PA/CF (CF with anti-static function), piece-dyed (vat and disperse) (partly finished with flame retardant products accepted by OEKO-TEX®) or with water, soil or oil repellent finishing; woven fabric made of 100% PES, 100% PA, PES/EL, white, piece-dyed (disperse and acid) and finished, or woven fabric made of 100% PES, transfer printed (disperse) and finished, all with PAN coating; undyed or piece-dyed (incl. fluorescent colours) knitted fabrics (incl. fleece) and UV protection fabrics made of 100% PES, PES/CO, PES/CV, MAC/CO, MAC/CV, MAC/CO/PES, 100% PP, PP/PES, with or without spandex (EL) and antistatic fibers; woven fabric in PA, PES, or mixed with EL, or with PU, TPU, PTFE membrane laminated, or boned fabrics of above with white/piece-dyed PES or PA knitted fabrics (incl. polar fleece) & finished (incl. water/oil-repel, anti-stain) (based on material pre-certified according to OEKO-TEX® STANDARD 100)

PRODUCT CLASS

II (products with direct contact to skin) - Annex 4

Further compliance information (REACH, SVHC, POP, GB18401 etc.) can be found on [oeko-tex.com/en/faq](https://www.oeko-tex.com/en/faq).

The certificate is based on the test methods and requirements of the OEKO-TEX® STANDARD 100 that were in force at the time of evaluation.



This certificate BEWO 084394 is valid until
15.08.2024.

SUPPORTING DOCUMENTS

- ✓ Test report : BJ015 224706.1
- ✓ Declaration of conformity in accordance with EN ISO 17050-1 as required by OEKO-TEX®
- ✓ OEKO-TEX® Terms of Use (ToU)

Matz Bachmann
Managing Director

Dijana Ajdihovic
Ecology Team Leader

Zurich, 2023-07-21

