



Flame Retardant fabric for FR-clothing

MADEIRA-320

100% COTTON

320 GSM / TWILL 3/1



Fabric name	Madeira-320
Fabric weight	320 ± 10 gsm
Composition	100% Cotton
Full width	152 ± 2 cm
Weave	Twil 3/1
Finishes	Flame Retardant
Application	FR jackets, trousers and coveralls
Washing instruction	

FR & SPECIAL PROPERTIES

Flame retardant	EN ISO 11612 (A1 & A2, B1, C1, E3, F1)	50×75°C ISO 15797
	EN ISO 11611 (Class 1)	50×75°C ISO 15797
	EN ISO 11612 (A1 & A2)	100×75°C ISO 15797
	EN 11612 D1	5×75°C ISO 15797

PHYSICAL PROPERTIES

		warp	
Tensile strength, N	ISO 13934-1:1999	1600	1000
Tearing strength, N	ISO 13937-2:2000	22	17
Dimensional Stability To Washing, max	ISO 5077	3%	
Abrasion Resistance	ISO 12947-2:1999	26,500 rubs	
Pilling Resistance	ISO 12945-2:2001	3-4	

COLOUR FASTNESS

		Light	Mid	Dark	Special	
		Orange, Yellow, Red	Green, Grey, Royal Blue	Dark Navy, Navy, Royal Blue	Black	
Wash Fastness Method E2S (95°C)	ISO 105-C06	Colour Change	4-5	4-5	4-5	4
		Stain on Polyester	4-5	4-5	4	4
		Stain on Cotton	4	4	4	3-4
Rub Fastness	ISO 105-X12	Wet	3	3	2-3	2
		Dry	4	4	4	4
Light Fastness	ISO 105-B02	3	4	4	4	

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CERTIFICATE OF TEST

Certificate of test n°

24EP1098

AITEX declares that the article:

Given by the company:

"Madeira-320"

Information supplied by the customer:
Composition and percentage: 100% Cotton, FR-Twill 2/1
Weight: 320 gsm
Colour: Red
Others: 573

XM TEXTILES POLSKA SP. Z O. O.

18 WOLNOŚCIOWA
PL-95-200
Pabianice

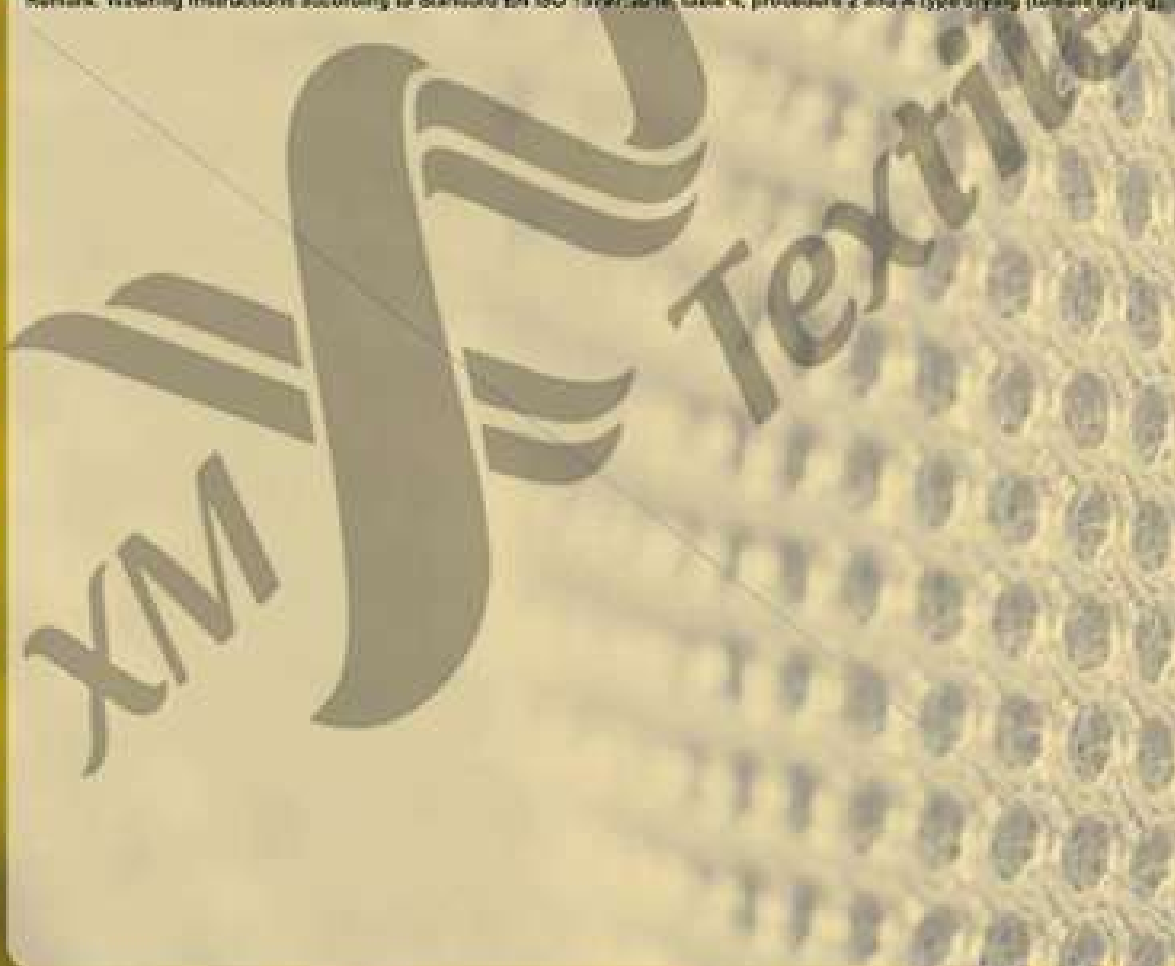
Complies with the requirements of the standard/s:

EN ISO 11612:2015. PROTECTIVE CLOTHING. CLOTHING TO PROTECT AGAINST HEAT AND FLAME.

TEST	RESULTS	REQUIREMENTS	REPORT A.o.
Clause 7.4 Molten aluminium splash after 5-washing cycles	Level D1 g = 197 g	Level D1 100-190 g = 200	2024EP1098

Remark: Washing instructions according to Standard EN ISO 15797:2016, table 4, procedure 2 and A type drying (tumble drying)

certificate



The test results above indicated are shown in the testing report:

Rev. 1.

2024EP1097

This revision cancels and replaces the previous

issued by AITEX on: 22/09/2024

This document is of application for the tested sample, according to the tests that have been done in the previously mentioned dates in the reports above shown. This does not imply any monitoring or control activity on the product, done by AITEX. This document is a test summary and does not imply a product certification

Signed by: Lucia Martinez
Head of PPE and Ballistic
department

Emenda
digitalmente por
FABEL BLÓPNIK
LUKASZ GRAS
Fecha: 2024.09.27
13:50:23 +0100



CERTIFICATE OF TEST

Certificate of test nº

23EP0216

AITEX declares that the articles

Given by the company

"MADEIRA-320"

According to information supplied by the customer:
Fabrico ref - MADEIRA-320
Composition and percentage: 100% Cotton, FR-Twill 3/1
Weight: 320 gsm
Colour: Black
Others (if any) 44)

XM TEXTILES EUROPE UAB

Dariusis ir Gireno st. 42A Office 509
LT-02159
Vinius

Complies with the requirements of the standards

EN ISO 13688:2013 Protective clothing. General requirements.

TEST	RESULTS	REQUIREMENTS	REPORT No.
Clause 4.2 Determination of pH value	9.9 ± 0.50	3.5 < pH < 9.5	2023EP0216

EN ISO 11612:2016. Protective clothing. Clothing to protect against heat and flame.

TEST	RESULTS	REQUIREMENTS	REPORT No.
Clause 6.3 Limited flame spread, as received and after 100 washing cycles (Procedure A)	A1	No specimen must ignite toward the top or toward the edges. No specimen shall give hole formation of 5 mm or greater in any direction. No specimen shall give falling or molten debris. The afterflame time is 4.2 s The afterglow time is 0.2 s	2023EP0216
Limited flame spread, as received and after 100 washing cycles (Procedure B)	A2	No specimen must ignite toward the top or toward the edges. No specimen shall give flaming or molten debris. The afterflame time is 4.2 s The afterglow time is 0.2 s	2023EP0216

Remark: Washing instructions according to Standard EN ISO 15797:2016, table 4, procedure 2 (70°C) and A type drying (tumble dry)

The test results above indicated are shown in the testing report.

2023EP0216

Issued by AITEX on: 23/09/2023

This document is of application for the tested sample, according to the tests that have been done in the previously mentioned date in the reports above shown. This does not imply any monitoring or control activity on the product done by AITEX. This document is a test summary and does not imply a product certification.

Signed by: Raquel Muñoz González
Manager Innovation Area

CERTIFICATE OF TEST

Certificate of test n°

23EP0116

AITEX declares that the articles:

Given by the company:

Fabric MADEIRA-320

According to information supplied by the customer.
Fabric reference: MADEIRA-320
Composition and percentage: 100% Cotton
Weight: 320 gsm
Colour: Dark Navy
Others: FR-7 will 3/1

Shanghai XM Group LTD

Room 2403, 88 Guangxin Road
CN-200063
SHANGHAI

Complies with the requirements of the standard/s

EN ISO 11612:2016. Protective clothing. Clothing to protect against heat and flame.

TEST	RESULTS	REQUIREMENTS	REPORT No.	
Clause 6.2.1	Heat resistance (150°C after 50 washing cycles)	Warp: -0.4% Weft: -0.4%	No igniting and no shrink by more than 5%	2019CN0658
Clause 6.3	Limited flame spread, as received and after 50 washing cycles (Procedure B)	A2	No specimen must ignite toward the top or toward the edges No specimen shall give flaming or molten droplets The afterflame time is ≤ 2 s The afterglow time is ≤ 2 s	2019CN0658
Clause 6.4	Dimensional change after 5 washing cycles	Warp: -2.0% Weft: -2.0%	$\pm 3\%$	2019CN0658
Clause 6.5.1	Tensile strength after 50 washing cycles	Warp: 1500 N Weft: 970 N	≥ 300 N	2019CN0658
Clause 6.5.2	Tear strength after 50 washing cycles	Warp: 21 N Weft: 17 N	≥ 10 N	2019CN0658
Clause 7.2	Convecting heat after 50 washing cycles	Level B1 HTP24 = 5.6 s	Level B1 4 s RHTP24 = 10	2019CN0658
Clause 7.3	Resistant heat after 50 washing cycles	Level C1 RH11,24 = 12.2 s	Level C1 7 s RH11,24 = 20	2019CN0658
Clause 7.6	Contact heat after 50 washing cycles	Level F1 S = 7.7 s	Level F1 5 s S = 10	2019CN0658

Remark: Washing instructions according to Standard EN ISO 15797:2016, table 4, procedure 2 (75°C) and A type drying (tumble drying).

The test results above indicated are shown in the testing report:

2019CN0658

Issued by AITEX on: 19/09/2019.

This document is of application for the tested sample, according to the tests that have been done in the previously mentioned dates in the reports above shown. This does not imply any monitoring or control activity on the product done by AITEX. This document is a test summary and does not imply a product certification.

Signed by: Raquel Muñoz González
Manager Innovation Area



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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 bonded 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

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)

Manfred Bachmann
Managing Director

Dijana Ajdovic
Ecology Team Leader

Zurich, 2023-07-21

