



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 Box	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.

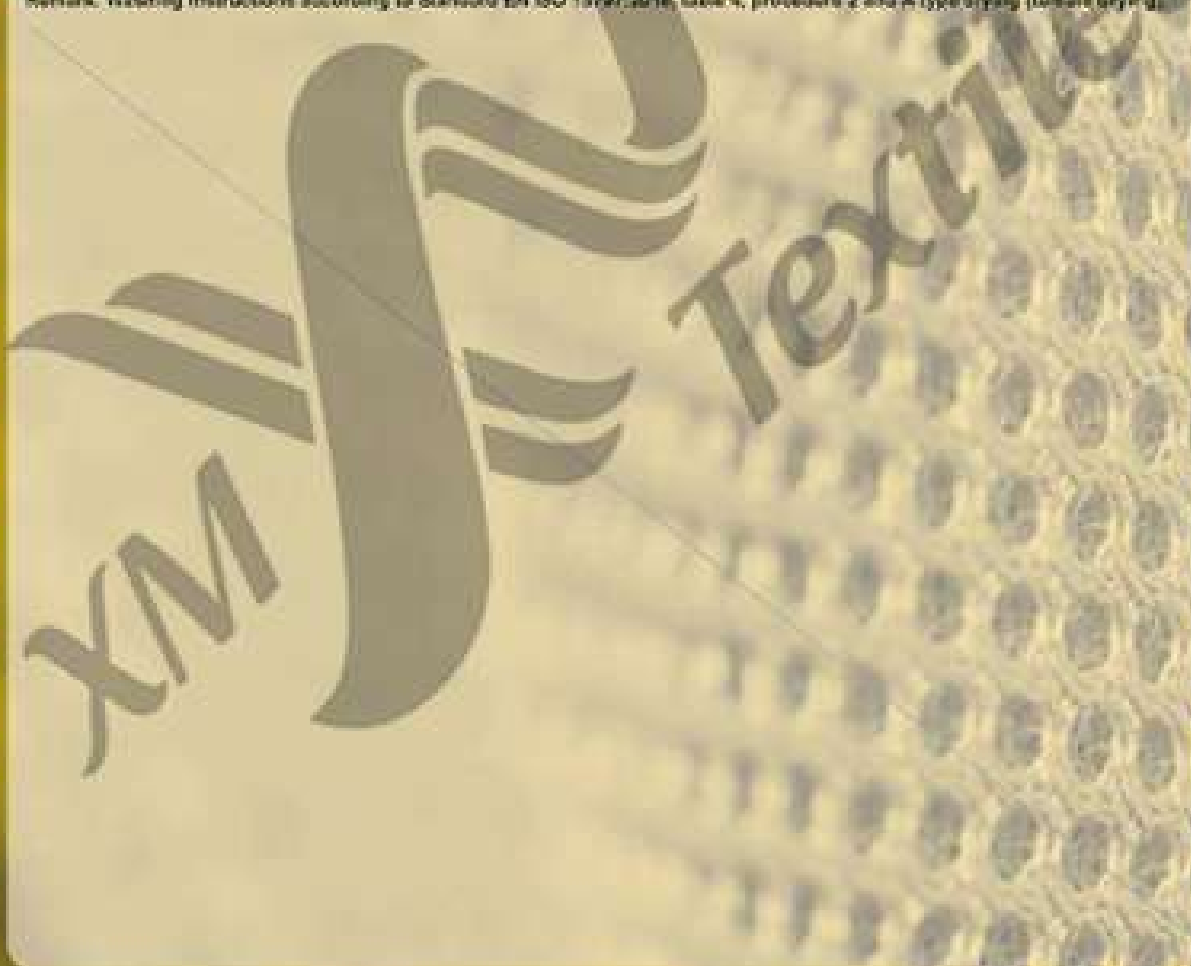
18 WOLNOŚCIOWA
PL-95-200
Pabianice

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 I.o.
Clause 7.4 Molten aluminium splash after 5 washing cycles	Level D1 g = 197 g	Level D1 100-150 g = 200	200-150-197

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



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

2024EP1097

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 BLICHI
L. ARRERAS
Fecha: 2024.09.27
13:50:23 +0100

Rev. 1.

This revision
cancels and
replaces the
previous

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:
Fabric ref. - MADEIRA-320
Composition and percentage: 100% Cotton, FR-Twill 3/1
Weight: 320 gsm
Colour: Black
Others (if any) 443

XM TEXTILES EUROPE UAB

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

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	pH=9.50	3.5 < pH < 9.5	2023EP0215

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 < 2 s The afterglow time is < 2 s	2023EP0215
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 < 2 s The afterglow time is < 2 s	2023EP0215

Remark: Washing instructions according to Standard EN ISO 15797:2018, table 4, procedure 2 (70°C) and A type drying (tumble dry).

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

2023EP0215

Issued by AITEX on: 23/02/2023

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

CERTIFICATE OF TEST

Certificate of test n°

23EP0116

AITEX declares that the article:

Given by the company:

"Fabric MADEIRA-320"

Shanghai XM Group LTD

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

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 heat 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 debris The afterflame time is ≤ 2 s The afterglow time is ≤ 2 s	2019CN0658
Clause 6.4	Dimensional change after 5 washing cycles	Warp: -3.0 %	Weft: -3.0 %	$\pm 3\%$	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	Convective heat after 50 washing cycles	Level B1 HTP24: 5.6 s		Level B1 4 s RHTP24 ≤ 10	2019CN0658
Clause 7.3	Radiant 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 5.77 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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**STANDARD
100**

**BEWO 084394
TESTEX**

**This certificate BEWO 084394 is valid until
15.08.2025.**

SUPPORTING DOCUMENTS

- ✓ Test report : BJ015 245163.1
- ✓ Declaration of conformity in accordance with
EN ISO 17050-1 as required by OEKO-TEX®
- ✓ OEKO-TEX® Terms of Use (ToU)

A handwritten signature in blue ink, appearing to read 'M. Bachmann', positioned above a horizontal line.

Matz Bachmann
Managing Director

A handwritten signature in blue ink, appearing to read 'D. Ajdinovic', positioned above a horizontal line.

Dijana Ajdinovic
Ecology Team Leader