

CERTIFICATE OF TEST

Certificate of test nº

23EP0209

AITEX declares that the articles:

Given by the company:

“POSEIDON-245”

According information supplied by the customer:
Fabric reference: POSEIDON-245
Composition and percentage: 80% Cotton, 19% Polyester,
1% Antistatic, FR-Twill 2/2
Weight: 245 gsm
Colour: Orange
Others (if any): 440

XM TEXTILES EUROPE UAB

Dariaus ir gireno st. 42A Office 509
LT-02189
Vilnius

Complies with the requirements of the standard/s:

EN ISO 13688:2013 Protective clothing. General requirements.

TEST	RESULTS	REQUIREMENTS	REPORT No.
Clause 4.2 Determination of pH value	pH=5,10	3.5 < pH < 9.5	2023EP0208

EN ISO 11612:2015. 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 flaming or molten debris The afterflame time is ≤ 2 s The afterglow time is ≤ 2 s	2023EP0208
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	

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

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

2023EP0208

Issued by AITEX on: 23/02/2023.

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Signed by: Raquel Muñoz González
Manager Innovation Area

CERTIFICATE OF TEST

Certificate of test n°

24EP0415

AITEX declares that the articles:

Given by the company:

"Poseidon-245"

Information supplied by the customer:

Fabric ref. Poseidon-245

Weight 245 gsm

Composition and percentage: 80% Cotton, 19% Polyester,
1% Antistatic, FR-Twill 2/2

Color Navy / Others (if any) 556

XM TEXTILES POLSKA SP. Z O. O.

16 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 No.
Clause 6.2.1	Heat resistance (180)°C after 5 washing cycles	Warp: -2 %	Weft: -1,6 %	No ignite, no melt and no shrink by more than 5%	2024EP0414
Clause 6.3	Limited flame spread as received and after 5 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 flaming or molten debris The afterflame time is ≤ 2 s The afterglow time is ≤ 2 s	2024EP0414
	Limited flame spread as received and after 5 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	2024EP0414
Clause 6.4	Dimensional change after 5 washing cycles	Warp: -1,0 %	Weft: -1,0 %	≤ ± 3%	2024EP0414
Clause 6.5.1	Tensile strength after 5 washing cycles	Warp: 1200 N	Weft: 570 N	≥ 300 N	2024EP0414
Clause 6.5.2	Tear strength after 5 washing cycles	Warp: 22,9 N	Weft: 20,2 N	≥ 10 N	2024EP0414
Clause 7.2	Convective heat after 5 washing cycles	Level B1 HTI ^a 24: 5,8 s		Level B1 4 ≤ HTI ^a 24 < 10	2024EP0414
Clause 7.3	Radiant heat after 5 washing cycles	Level C1 RHTI ^a 24: 12,2 s		Level C1 7 ≤ RHTI ^a 24 < 20	2024EP0414
Clause 7.5	Molten aluminium splash after 5 washing cycles	Level D2 283 g		Level D2 200 ≤ g < 350	2024EP0414
Clause 7.5	Molten iron splash after 5 washing cycles	Level E3 202,99 g		Level E3 ≥ 200 g	2024EP0414
Clause 7.6	Contact heat after 5 washing cycles	Level F1 t _i : 8,6 s		Level F1 5 ≤ t _i < 10	2024EP0414

Remark: Washing instructions according to Standard EN ISO 6330:2021, method 6N and F type drying (type A1 tumble drying).

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

2024EP0414

Issued by AITEX on: 10/02/2021.

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Signed by: Lucía Martínez
Head of PPE and Ballistic
department

CERTIFICATE OF TEST

Certificate of test n°

24EP0415

AITEX declares that the articles:

Given by the company:

"Poseidon-245"

Information supplied by the customer:
Fabric ref. Poseidon-245
Weight 245 gsm
Composition and percentage: 80% Cotton, 19% Polyester,
1% Antistatic, FR-Twill 2/2
Color Navy / Others (if any) 556

XM TEXTILES POLSKA SP. Z O. O.

16 WOLNOŚCIOWA
PL-95-200
Pabianice

Complies with the requirements of the standard/s:

EN ISO 11611:2015. PROTECTIVE CLOTHING. CLOTHING TO PROTECT AGAINST HEAT AND FLAME.

	TEST	RESULTS		REQUIREMENTS	REPORT No.
Clause 6.2	Tensile strength after 5 washing cycles	Warp: 1200 N	Weft: 570 N	≥ 400 N	2024EP0414
Clause 6.3	Tear strength after 5 washing cycles	Warp: 22,9 N	Weft: 20,2 N	≥ 15 N	2024EP0414
Clause 6.7	Limited flame spread as received and after 5 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 flaming or molten debris The afterflame time is ≤ 2 s The afterglow time is ≤ 2 s	2024EP0414
	Limited flame spread as received and after 5 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	2024EP0414
Clause 6.6	Dimensional change after 5 washing cycles	Warp: -1,0 %	Weft: -1,0 %	$\leq \pm 3\%$	2024EP0414
Clause 6.8	Small splashes of molten metal after 5 washing cycles	Class 1 19 drops		Class 1 $15 \leq \text{drops} < 25$	2024EP0414
Clause 6.9	Radiant heat after 5 washing cycles	Class 1 RHT ^a 24: 12,2 s		Class 1 $7 \leq \text{RHT}^a 24 < 16$	2024EP0414
Clause 6.10	Electrical insulation after 5 washing cycles	$8,92 \cdot 10^6 \Omega$		$> 10^5 \Omega$	2024EP0414

EN 1149-5:2018. PROTECTIVE CLOTHING. ELECTROSTATIC PROPERTIES. PART 5 MATERIAL PERFORMANCE AND DESIGN REQUIREMENTS.

	TEST	RESULTS	REQUIREMENTS	REPORT No.
EN 1149-3:2004	Charge Decay test (Method 2) after 5 washing cycles	$S = 0,5$ $t_{50} < 0,01$ s	$S > 0,2$ or $t_{50} < 4$ s	2024EP0414

Remark: Washing instructions according to Standard EN ISO 6330:2021, method 6N and F type drying (type A1 tumble drying).

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

2024EP0414

Issued by AITEX on: 10/02/2021.

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Signed by: Lucía Martínez
Head of PPE and Ballistic
department

CERTIFICATE OF TEST

Certificate of test n°

25EP2048

AITEX declares that the articles:

Given by the company:

"Poseidon-245"

Information supplied by the customer:

Composition: 80% Cotton, 19% Polyester, 1% Antistatic,
FR-Twill 2/2
Weight: 245 gsm
Color: HV Yellow
Others: 686

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16 WOLNOŚCIOWA
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Complies with the requirements of the standard/s:

EN 13034:2005+A1:2009 PROTECTION CLOTHING AGAINST LIQUID CHEMICALS PRODUCTS, ACCORDING TO POINT 4, TABLE 1:

	TEST	RESULTS		REQUIREMENTS	REPORT No.
Clause 4.4 EN 14325:2004	Abrasion resistance after 5 washing cycles	Class 6 n > 2000 cycles		Class 6 n > 2000 cycles	2025EP1997
Clause 4.7 EN 14325:2004	Determination of tear resistance after 5 washing cycles	Class 2 Warp: 34,3 N / Weft: 23,5 N		Class 2 20 N < n ≤ 40 N	2025EP1997
Clause 4.9 EN 14325:2004	Determination of tensile strength after 5 washing cycles	Class 5 Warp: 1100 N / Weft: 560 N		Class 5 500 N < N ≤ 1000 N	2025EP1997
Clause 4.10 EN 14325:2004	Puncture resistance after 5 washing cycles	Class 2 44,37 N		Class 2 10 N < n ≤ 50 N	2025EP1997
Clause 4.12 EN 14325:2004	Repellency to liquids after 5 washing cycles	Class 3 H ₂ SO ₄ (30 %): 98,2 %	Class 3 NaOH (10 %): 98,2 %	Class 3 > 95% Class 2 > 90% Class 1 > 80%	2025EP1997
		Class 2 O-xylene: 92,9 %	Class 3 butanol: 98,3 %		
Clause 4.13 EN 14325:2004	Resistance to penetration to liquids after 5 washing cycles	Class 3 H ₂ SO ₄ (30%): 0,0%	Class 3 NaOH (10 %): 0,0 %	Class 3 < 1% Class 2 < 5% Class 1 < 10%	2025EP1997
		Class 2 O-xylene: 3,8 %	Class 2 1-butanol: 1,0 %		

Remark: Washing instructions according to Standard EN ISO 6330:2021, method 6N and F drying (type A1 tumble drying).

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

2025EP1997

Issued by AITEX on: 29/04/2025.

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 implies any monitoring or control activity on this product done by AITEX.

This document is a test summary and does not imply a product certification.

Signed by: Lucía Martínez
Head of PPE and Ballistic
department

CERTIFICATE OF TEST

Certificate of test n°

20CN0304

AITEX declares that the articles:

Given by the company:

"FABRIC POSEIDON-245"

Information according to the customer:

Fabric reference: POSEIDON-245

Composition and percentage: 80% Cotton, 19%

Polyester and 1% Antistatic, FR-Twill 2/2

Weight: 245 gsm

Color: Yellow HV // Others: FRL-064-WD

SHANGHAI XM GROUP LTD
Room 2403, 88 Guangxin Road
CN-200063
SHANGHAI

Complies with the requirements of the standard/s:

EN ISO 20471:2013/A1:2016 HIGH VISIBILITY WARNING CLOTHING FOR PROFESSIONAL USE, ACCORDING FOLLOWING POINTS:

5.1 Colour performance requirements of new material

5.2 Colour after Xenon test

5.3.1 Colour fastness to rubbing

5.3.2 Colour fastness to perspiration

5.3.3 Colour fastness to laundry

5.4 Dimensional change of background material (x 5 cycles washing, 6N, Tumble Dryer F).

5.5.1 Tensile strength of woven material

5.6.3 Physiological performance — Water vapour

7.5 Ageing

7.5.1. General

Colour after wash, according ISO 6330:2012, 5 washing cycles at 60°C, 6N, and Tumble Dryer, F.

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

2020CN0303

Issued by AITEX on: 09/06/2020

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 implies any monitoring or control activity on this 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 nº

22EP7902

AITEX declares that the articles:

Given by the company:

"Fabric ref.- POSEIDON-245"

According information supplied by the customer:

Fabric reference: POSEIDON-245

Composition and percentage: Cotton 80%, Polyester 19% and Antistatic 1%, FR-Twill 2/2

Weight: 245 gsm

Color: Yellow Hi-Vis

Others: FRL-361

XM TEXTILES EUROPE UAB

Dariaus ir Gireno st. 42A Office 509

LT-02189 Vilnius

Lituania

Complies with the requirements of the standard/s:

EN ISO 20471:2013/A1:2016. High visibility clothing. Test methods and requirements

	TEST	RESULTS	REQUIREMENTS	REPORT No.
Clause 5.3.3	Colour fastness to dry cleaning	Change in colour = 5 Staining = 4-5	Change in colour ≥ 4 Staining ≥ 4	2022EP7552
	Colour fastness to bleaching	Change in colour = 4-5	Change in colour ≥ 4	2022EP7552
	Colour fastness to hot pressing (150°C)	Change in colour = 5 Staining = 4-5	Change in colour $\geq 4-5$ Staining ≥ 4	2022EP7552

EN 61482-2:2020. Protective clothing against the thermal hazards of an electric arc. Requirements

	TEST	RESULTS	REQUIREMENTS	REPORT No.
Clause 4.4.3	Determination of Arc Protection Class using a constrained and directed arc (box test) after 5 washing cycles	Arc Protection Class (APC) 1	Arc Protection Class (APC) 1	2022EP7552

Remark: Washing instructions according to Standard EN ISO 6330:2012, method 6N and F type drying (tumble dry).

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

2022EP7552

Issued by AITEX on: 22/07/2022.

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 implies any monitoring or control activity on this 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



Flame Retardant fabric for FR-clothing

POSEIDON-245

80% COTTON / 19% POLYESTER / 1 % AS

245 GSM / TWILL 2/2



Fabric name	Poseidon-245
Fabric weight	245 ± 10 gsm
Composition	80% Cotton, 19% Polyester, 1% AS
Full width	152 ± 2 cm
Weave	Twill 2/2
Finishes	Flame Retardant, MR (Multi-Risk)
Application	FR jackets, trousers and coveralls
Washing instruction	

FR & SPECIAL PROPERTIES

Flame retardant	EN ISO 11612 (A1, A2, B1,C1,E3, F1)	5×60°C ISO 6330
	EN ISO 11611 (Class 1)	5×60°C ISO 6330
	EN 11612 (A1, A2)	100×75°C ISO 15797
	EN ISO 14116	5×60°C ISO 6330
	EN 11612 D2	5×60°C ISO 6330
Electric arc	EN 61482-2	5×60°C ISO 6330
Arc rating	EN 61482-1-1	5×60°C ISO 6330
Antistatic	EN 1149-5 (1149-3 method 2)	5×60°C ISO 6330
Multi-Risk	EN 13034	5×60°C ISO 6330
Hi-Vis	EN 20471	5×60°C ISO 6330

PHYSICAL PROPERTIES

		warp	weft
Tensile strength, N	BS EN ISO 13934-1:1999	1260	540
Tear strength, N	BS EN ISO 13937-2:2000	25	20
Dimensional Stability To Washing, max	ISO 5077	3%	
Abrasion Resistance	ISO 12947-2:1999	25, 000 rubs	
Pilling Resistance	ISO 12945-2:2001	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	4-5
		Stain on Polyester	3-4	4	2-3	2-3
		Stain on Cotton	4	4-5	4	3-4
Rub Fastness	ISO 105-X12	Wet	3-4	3-4	2-3	2-3
		Dry	4-5	4-5	3	3-4
Light Fastness	ISO 105-B02		3	3-4	3-4	4

www.xmtextiles.com

XM TEXTILES EUROPE

Darius ir Gireno st. 42A, Room 509
Vilnius, LT-02189, Lithuania
Tel. +370 52 078 703
info@xmtextiles.com

XM TEXTILES ROMANIA

Sos.Tamasi 20, Hala 6B, Parter,
Buftea, 070000, Ilfov, Romania
Tel. +40 31 630 3639
info@xmtextiles.com

XM TEXTILES ITALIA SRL

Via dei Notai, Blocco 23, Centergross,
40050 Funo di Argelato (BO), Bologna, Italy
Tel. +39 051 952 8202
info@xmtextiles.com