



Flame Retardant fabrics for FR-Clothing



xmfireline.com

WHY CHOOSE OUR FR-FABRICS?



XM FireLine™ designs and manufactures Flame Retardant fabrics for protective and fr-clothing.



We have 15 years experience of work with protective clothing and today we sell our fr-fabrics on 6 continents in 51 countries. XM FireLine™ represented by offices in Asia (in Shanghai), Europe (Lithuania, Romania, Spain, Portugal, Poland and Russia) and South America (Sao-Paulo).



We have 18 different flame retardant fabrics in our product range and 12 of them we have always in stock in 6 main shades. Other 6 fr-fabrics we make per order.



All our FR-fabrics resist 50/100 wash cycles and certified to ISO 11612. Some of our fabrics are also certified to EN 1149-5 for antistatic properties. We test every production lot to deliver you 100% quality.

SAFETY & PROTECTION



XM flame retardant fabrics protect against Heat & Flame. FR-clothing made of our fr-fabrics increases safety of workers due to proven quality, confirmed by certification in BTTG (UK), AITEX (Spain).

QUALITY



XM flame retardant fabrics are made with high grade combed cotton for softness and durability. We use double FR-treatment (THPC) to guarantee FR properties last 50-100 washes. Antistatic properties are provided by Belltron (Japan) antistatic carbon yarn and we use VAT dyes to have CF to washing 4-5. Every batch of XM FireLine fabrics is tested for Flame Resistance after 50 washes.

ECO-FRIENDLY



XM flame retardant fabrics are OEKO-TEX 100 certified. That means our fabrics consists no harmful substances and ecologically friendly to the wearers. We renew the certificate OEKO-TEX every year, since it is valid for only 12 months. XM flame fabrics are also continuously tested for Formaldehyde content and the tests always confirm that our fabrics are ECO-friendly.

FR-STANDARDS



XM flame retardant fabrics are tested according to the requirements of European ISO system and also to the American NFPA standards. The reason is simple - we have clients all over the world and we must comply to different international standards. XM fabrics have been tested more rigorously and have maximum compliance to FR-standards.

FLAME RESISTANCE AFTER 100 WASHES



XM fabrics (8 fabrics) have been tested in AITEX lab (Spain) for flame resistant properties after 100 wash cycles. The fr-fabrics undergone industrial laundry at 75°C for 100 washes according to ISO 15797. After that Limited Flame Spread test has been done by ISO 15025. No After-flame or After-glow has been observed.

CERTIFICATES



XM flame retardant fabrics are certified to the following standards: ISO 11611, ISO 11612, EN ISO 1149, EN 13034, EN 61482-1-2, EN 469, EN 20471, EN 14116, etc. The certificates have been obtained in international laboratories and available for download on our website www.XMFireLine.com



OUR FR-FABRIC RANGE



| # | PAGE | WEIGHT GSM | FABRIC | DESCRIPTION | USABLE WIDTH/ CM | EN ISO 11612 | EN ISO 11611 | EN ISO 1149-5 | EN ISO 13034 | EN 61482-1-1 | EN 61482-1-2 |
|----|------|------------|-------------------|---|------------------|--------------|--------------|---------------|--------------|--------------------------|----------------|
| 1 | 4 | 480 | GEFEST-480 | 100% COTTON • SATIN 5/2 • FR | 150 | ■ | ■ | | | | |
| 2 | 6 | 420 | GEFEST-420 | 100% COTTON • SATIN 4/1 • FR | 150 | ■ | ■ | | | 16.1 CAL/CM ² | |
| 3 | 8 | 350 | COLOMBO AS | 99% COTTON • 1% AS • TWILL 2/2 • FR | 150 | ■ | ■ | 1149-3 | ■* | 9.2 CAL/CM ² | CLASS 1 (4 KA) |
| 4 | 10 | 350 | ETNA | 99% COTTON • 1% AS • SATIN 4/1 • FR | 150 | ■ | ■ | 1149-3 | | 15.2 CAL/CM ² | CLASS 1 (4 KA) |
| 5 | 12 | 330 | CORFU-330 | 99% COTTON • 1% AS • TWILL 3/1 • FR | 150 | ■ | ■ | 1149-3 | | | CLASS 1 (4 KA) |
| 6 | 14 | 320 | MADEIRA-320 | 100% COTTON • TWILL 3/1 • FR | 150 | ■ | ■ | | | | |
| 7 | 16 | 320 | MADEIRA-320 AS | 99% COTTON • 1% AS • TWILL 3/1 • FR | 150 | | | 1149-3 | | | |
| 8 | 18 | 260 | MADEIRA-260 | 100% COTTON • TWILL 3/1 • FR | 150 | ■ | ■ | | | | |
| 9 | 20 | 220 | FIJI | 99% COTTON • 1% AS • TWILL 2/1 • FR | 150 | ■ | ■ | 1149-3 | ■* | 8.6 CAL/CM ² | |
| 10 | 22 | 300 | POSEIDON-300 | 80% COTTON • 19% POLYESTER • 1% AS • TWILL 2/2 • FR • MULTI-RISK | 150 | ■ | ■ | 1149-3 | ■ | 11.8 CAL/CM ² | CLASS 1 (4 KA) |
| 11 | 24 | 245 | POSEIDON-245 | 80% COTTON • 19% POLYESTER • 1% AS • TWILL 2/2 • FR • MULTI-RISK | 150 | ■ | ■ | 1149-3 | ■ | 10.0 CAL/CM ² | CLASS 1 (4 KA) |
| 12 | 26 | 185 | SONORA/ SONORA AS | 80% COTTON • 20% POLYESTER • PLAIN 1/1 • FR | 150 | ■ | | 1149-3 | | | |
| 13 | 28 | 260 | VOLCANO | 87% COTTON • 12% NYLON • 1% AS • SATIN 4/1 • FR • MULTI-RISK | 150 | ■ | ■ | 1149-3 | ■ | 12 CAL/CM ² | CLASS 1 (4 KA) |
| 14 | 30 | 160 | FR-LINING-160 | 100% COTTON • PLAIN 1/1 • FR | 150 | EN 14116 | | | | | |
| 15 | 32 | 120 | ARAVIS-120 | 50% M-ARAMID • 50% FR VISCOSE • PLAIN 1/1 • FR | 150 | ■ | | | | | |
| 16 | 34 | 210 | ARTEX-210 | 93% M-ARAMID • 5% P-ARAMID • 2% AS • TWILL 2/1 • FR | 150 | ■ | | 1149-3 | | | |
| 17 | 36 | 250 | MURANO-250 | 60% MODACRYLIC • 35% COTTON • 4% N • 1% AS • RIP-STOP • FR • MULTI-RISK | 150 | ■ | ■ | 1149-3 | ■ | 6.9 CAL/CM ² | |
| 18 | 38 | 280 | FR-FLEECE-280 | 60% MODACRYLIC • 39% COTTON • 1% AS • KNITTED FABRIC • FR | 150 | ■ | | 1149-3 | | | |
| 19 | 40 | 200 | FR-JERSEY-200C | 60% MODACRYLIC • 38% COTTON • 2% AS • KNITTED FABRIC • FR | 155 | ■ | | 1149-3 | | | CLASS 1 (4 KA) |
| 20 | 42 | 230 | FR-PIQUE-230 | 60% MODACRYLIC • 38% COTTON • 2% AS • KNITTED FABRIC • FR | 165 | ■ | | 1149-3 | | 8 CAL/CM ² | |
| 21 | 44 | 250 | FR-OXFORD-250 | 98% POLYESTER • 2% AS • PLAIN 1/1 • FR | 150 | EN 14116 | | 1149-3 | EN 343 | | |

[*] - optional treatment, make per order

MULTI-RISK finish conforms to EN ISO 13034 standard and adds resistance to such substances as Water, Oil, some Acids and Alkali.

We have ALL the Certificates mentioned in the table above on our web-site to view or download in open access (no registration required).

AITEX (SPAIN), **BTTG** (UK), **KINECTRICS** (CANADA) ARE TESTING LABORATORIES WHERE WE TEST AND CERTIFY XM FIRELINE FABRICS.



GEFEST-480

100% COTTON , 480 GSM, SATIN 5/2

50 x
WASH*

| | |
|---------------------------|----------|
| | |
| EN 11612 | EN 11611 |
| A1, A2, B1, C1, E3, F1 | Class 2 |

FLAME RETARDANT

COTTON FABRIC | WELDING

Flame retardant fabric Gefest-480 is designed for welders working on open sea oil-platforms, in dry docks or in naval shipyards. Gefest-480 protective fabric is also used for welding jackets and trousers in machinery, metallurgy, oil and gas pipeline construction, automotive industry, etc.

The specific feature of Gefest-480 is it's fantastic tear and tensile strength. The fabric is so strong that it's impossible to tear it with bare hands. High durability of the fabric is achieved through the use of long staple cotton fibers which are twisted into the warp and weft. Such durability increases the life cycle of welder's clothing. Moreover, satin weave makes molten metal drops slide off of the smooth surface instead of sticking to it what prevents fabric from ignition. Gefest-480 is a soft fabric which makes comfortable garments and provides protection from Heat and Flame (ISO 11611 & ISO 11612 certified).

[*] Tested in accordance to ISO 15025 after 50 industrial washes at 75 °C



OUR PARTNERS



SCAN FOR
DETAILS



GEFEST-480



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.




SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|------------|-----------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| GEFEST-480 | 100% Cotton | — | 480 gsm ±5% | Satin 5 / 2 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1800 N | 28 N | ≤ 3% | 35 000 rubs | 4 | |
| WEFT | 1200 N | 25 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|---------------------|-------------|-----------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

GEFEST-420

100% COTTON , 420 GSM, SATIN 4/1

| | | |
|--|---|---|
|  |  |  |
| EN 11612 | EN 11611 | EN 61482-1 |
| A1, A2, B1, C1, E3, F1 | Class 2 | 16,1 cal/cm ² |

FLAME RETARDANT

COTTON FABRIC | WELDING

Gefest-420 flame retardant protective fabric is purposed for professional welders clothing used in variety areas like machinery, metallurgy, oil and gas pipeline construction, automotive industry, etc. Satin weave of Gefest-420 is extremely useful on protective overalls, bibs and aprons for welders and other workers making molten metal drops slide off of the smooth surface of fabric easily. Being made of natural fibers it makes comfortable garments to wear and protects from risks of Flash Fire and Electric Arc.



OUR PARTNERS



SCAN FOR
DETAILS



GEFEST-420



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|------------|-----------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| GEFEST-420 | 100% Cotton | — | 420 gsm ±5% | Satin 4 /1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1700 N | 36 N | ≤ 3% | 31 300 rubs | 4 | |
| WEFT | 1500 N | 57 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|---------------------|-------------|-----------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

COLOMBO AS

99% COTTON, 1% ANTISTATIC YARN,
350 GSM, TWILL 2/2

FLAME RETARDANT, ANTISTATIC

COTTON FABRIC | WELDING

Colombo AS flame retardant protective fabric is best used in such industries as Automotive, Petrochemical, Power energetics. Made of natural fibers it is soft and comfort to wear and at the same time Colombo AS protects from risks of Flash fire, Electric Arc and ESD sparks. It is very durable and has unique balance of high tear resistance in both warp and weft directions. This endurance provided by trendy and tough weave twill 2/2. Carbon antistatic yarn woven into the surface of Colombo AS fabric makes garments absolutely safe to wear in explosive environment and ensures the necessary charge decay. Antistatic fiber prevents Electrostatic Discharge (ESD) sparks and safely discharges static electricity eliminating the risk of fire and explosion.

| | | | | | |
|------------------------|----------|--------------------|----------|-------------------------|------------|
| | | | | | |
| EN 11612 | EN 11611 | EN 1149-5 | EN 13034 | EN 61482-1 | EN 61482-2 |
| A1, A2, B1, C1, E3, F1 | Class 2 | EN 1149-3 method 2 | OPTIONAL | 9,2 cal/cm ² | Class 1 |



COLOMBO AS

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|------------|----------------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| COLOMBO AS | 99% Cotton, 1% Antistaic Yarn | Carbon (Belltron) | 350 gsm ±5% | Twill 2 /2 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1800 N | 45 N | ≤ 3% | 26 000 rubs | 4 | |
| WEFT | 1100 N | 40 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|-------------|------|--------------------------|-------|
| | | Orange, Red | Grey | Dark Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

ETNA

50 x WASH*

99% COTTON , 1% ANTISTATIC YARN,
350 GSM, SATIN 4/1

| | | | | |
|------------------------|----------|--------------------|--------------------------|------------|
| | | | | |
| EN 11612 | EN 11611 | EN 1149-5 | EN 61482-1 | EN 61482-2 |
| A1, A2, B1, C1, E3, F1 | Class 1 | EN 1149-3 method 2 | 15,2 cal/cm ² | Class 1 |

FLAME RETARDANT, ANTISTATIC

COTTON FABRIC | OIL & GAS

Etna is a 350 gsm middleweight quality cotton fabric with a flame retardant finishing designed for garments used in metallurgy. Etna FR-fabric has the highest level of protection from molten metal splashes with E3, in accordance to ISO 9185. Satin weave of Etna fabric is very useful on protective overalls, bibs and aprons for welders and other workers making molten metal drops slide off of the smooth surface of fabric easily. Being made of natural fibers it makes comfortable garments to wear and protects from risks of Flash Fire, Electric Arc and ESD sparks. Carbon antistatic yarn woven in stripes makes garments absolutely safe to wear in explosive environment and ensures the necessary charge decay.

[*] Tested in accordance to ISO 15025 after 50 industrial washes at 75 °C

OUR PARTNERS



SCAN FOR DETAILS



ETNA



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION





| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|---------|----------------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| ETNA | 99% Cotton, 1% Antistaic Yarn | Carbon (Belltron) | 350 gsm ±5% | Satin 4 /1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1400 N | 38 N | ≤ 3% | 21 000 rubs | 4 | |
| WEFT | 1100 N | 65 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|-------------|-------------|--------------------------|-------|
| | | Orange, Red | Green, Grey | Dark Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

CORFU-330

99% COTTON, 1% ANTISTATIC YARN

330 GSM, TWILL 3/1

| | | | |
|---|---|--|---|
|  |  |  |  |
| EN 11612 | EN 11611 | EN 1149-5 | EN 61482-2 |
| A1, A2, B1, C1, E3, F1 | Class 1 | EN 1149-3 method 2 | Class 1 |

FLAME RETARDANT, ANTISTATIC

COTTON FABRIC | MACHINE BUILDING

Corfu-330 is a flame-retardant 100% cotton fabric with 330 gsm density, with a classic twill 3/1 weave. Made of 100% natural fibre, it is comfortable to wear as everyday flame-retardant workwear such as FR-pants, FR-jackets, FR-bibs, and FR-overalls.



OUR PARTNERS



SCAN FOR DETAILS



CORFU-330

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

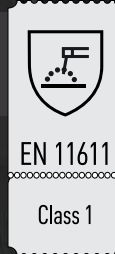
| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|-----------|-----------------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| CORFU-330 | 99% Cotton, 1% Antistatic yarn | Carbon (Belltron) | 330 gsm ±5% | Twill 3 / 1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1100 N | 28 N | ≤ 3% | 20 000 rubs | 3-4 | |
| WEFT | 610 N | 25 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|-------------|------|--------------------------|-------|
| | | Orange, Red | Grey | Dark Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

MADEIRA-320

100% COTTON, 320 GSM, TWILL 3/1

50x
WASH*



FLAME RETARDANT

COTTON FABRIC | MACHINE BUILDING

Madeira-320 is a flame retardant protective fabric made of pure long staple cotton. It can be used for middleweight clothing for welding as well as in metal processing works in heavy machinery, automotive industry, etc. Madeira-320 is a balanced choice for daily used FR-trousers, FR-jackets, FR-coveralls or FR-bibs in work environment with risks of exposure to heat and flame. Being made of 100% natural fibers it makes garments comfortable to wear and protects from risks of Flash Fire and Electric Arc at the same time.

[*] Tested in accordance to ISO 15025 after 50 industrial washes at 75 °C

OUR PARTNERS



SCAN FOR
DETAILS



MADEIRA-320



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

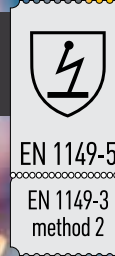
SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|-------------|-----------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| MADEIRA-320 | 100% Cotton | — | 320 gsm ±5% | Twill 3 /1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1600 N | 22 N | ≤ 3% | 26 500 rubs | 3-4 | |
| WEFT | 1000 N | 17 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|---------------------|-------------|-----------------------------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

MADEIRA-320 AS

99% COTTON , 1% ANTISTATIC YARN,
320 GSM, TWILL 3/1



FLAME RETARDANT, ANTISTATIC

COTTON FABRIC | MACHINE BUILDING

Madeira-320 AS is a flame retardant fabric made of long staple cotton with antistatic fibers woven into the weft. It can be used for clothing in welding, metal processing works in heavy machinery, automotive industry, etc. Madeira-320 AS makes comfortable FR trousers, FR jackets, FR coveralls or FR bibs and protects from risks of Flash Fire, Electric Arc and ESD sparks.

OUR PARTNERS



SCAN FOR
DETAILS



MADEIRA-320 AS

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.
This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

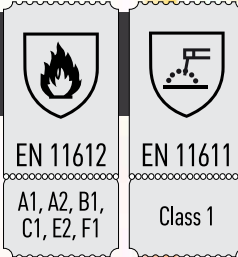
SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|----------------|-----------------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| MADEIRA-320 AS | 99% Cotton, 1% Antistatic yarn | Carbon (Belltron) | 320 gsm ±5% | Twill 3 / 1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1600 N | 22 N | ≤ 3% | 26 500 rubs | 3-4 | |
| WEFT | 1000 N | 17 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|-------------|-------------|--------------------------|-------|
| | | Orange, Red | Green, Grey | Dark Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

MADEIRA-260

100% COTTON, 260 GSM, TWILL 3/1



FLAME RETARDANT

COTTON FABRIC | MACHINE BUILDING

Madeira-260 is a flame retardant fabric made of long staple cotton. It can be used for lightweight and middleweight clothing in heavy machinery, automotive industry, etc. Protective clothing made of Madeira-260 FR fabric provides the wearer with comfort and protection from risks of Flash Fire and Heat. Madeira-260 is the right choice for the production of affordable fr-clothing with a high level of protection against heat and flame.



OUR PARTNERS



SCAN FOR DETAILS



MADEIRA-260

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|-------------|-----------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| MADEIRA-260 | 100% Cotton | — | 260 gsm ±5% | Twill 3 / 1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1100 N | 28 N | ≤ 3% | 20 000 rubs | 3-4 | |
| WEFT | 560 N | 26 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|--------------------------------|-------|------|--------------------------|-------|
| | | Red | Grey | Dark Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4-5 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

FIJI

99% COTTON, 1% ANTISTATIC YARN,
220 GSM, TWILL 2/1



EN 11612

A1, A2, B1,
C1, E2, F1



EN 1149-5

EN 1149-3
method 2



EN 13034

OPTIONAL



EN 61482-1

8,6 cal
cm²



EN 11611

Class 1

FLAME RETARDANT, ANTISTATIC

COTTON FABRIC | LIGHTWEIGHT UNIFORM

Fiji is a light flame retardant fabric with classic twill weave, developed specially for light flame retardant clothing. Fiji protective fabric is recommended for use as a middle layer of fr-clothing, like shirts, vests, light pants, or even light overalls for hot climate. FR-clothing made of Fiji fabric in combination with fire-resistant underwear and fire-resistant outer clothes provides superb protection of workers in risk zones. Made of natural fibers it is soft and comfort to wear and at the same time Fiji FR-fabric protects from risks of Flash fire and ESD sparks. Carbon antistatic yarn integrated as stripes in the surface of Fiji makes it absolutely safe for use in explosive atmospheres. To prevent Electrostatic Discharge (ESD) sparks, antistatic fibers safely discharge static electricity eliminating the risk of fire and explosion.



OUR PARTNERS



SCAN FOR
DETAILS



FIJI

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|---------|-----------------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| FIJI | 99% Cotton, 1% Antistatic yarn | Carbon (Belltron) | 220 gsm ±5% | Twill 2 / 1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1200 N | 21 N | ≤ 3% | 20 000 rubs | 4 | |
| WEFT | 430 N | 24 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|------------------------|------|--------------------------|-------|
| | | Orange, Red, Yellow | Grey | Dark Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 2-3 | 2 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

POSEIDON-300

50x WASH*

80% COTTON, 19% POLYESTER,
1% ANTISTATIC YARN,
300 GSM, TWILL 2/2

| | | | | | | |
|------------------------|----------|--------------------|----------|--------------------------|------------|----------|
| | | | | | | |
| EN 11612 | EN 11611 | EN 1149-5 | EN 13034 | EN 61482-1 | EN 61482-2 | EN 20471 |
| A1, A2, B1, C1, E3, F1 | Class 1 | EN 1149-3 method 2 | | 11,8 cal/cm ² | Class 1 | |

FLAME RETARDANT
ANTISTATIC, MULTI-RISK

COTTON | POLYESTER FABRIC
TRANSPORTATION OF OIL & GAS

Poseidon 300 is a high quality poly-cotton fabric with high content of cotton, improved by addition of polyester and antistatic yarn. It is developed for workers of Oil and Gas industries and it suits well both for rig-chiefs jackets and trousers and for oil-pipeline workers uniforms. The fabric with modern 2/2 twill weave is very comfortable to wear, has much better than pure cotton tear resistance and has excellent antistatic properties. An optional Multi-Risk treatment, makes it water repellent and also resistant to the influence of acids, alkali, grease and oil.

(*) Tested in accordance to ISO 15025 after 50 industrial washes at 75 °C

OUR PARTNERS



SCAN FOR DETAILS



POSEIDON-300



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|--------------|---|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| POSEIDON 300 | 80% Cotton, 19% Polyester, 1% Antistatic yarn | Carbon (Belltron) | 300 gsm ±5% | Twill 2 /2 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1400 N | 21 N | ≤ 3% | 28 300 rubs | 4 | |
| WEFT | 700 N | 17 N | ≤ 3% | | | |


| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|------------------------|-------------|--------------------------------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 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 |
| WET RUBBING | ISO 105 X12 | 3-4 | 3-4 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4-5 | 3 | 3-4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 3-4 | 4 |



FLAME RETARDANT FABRIC FOR FR-CLOTHING

POSEIDON-245

80% COTTON, 19% POLYESTER,
1% ANTISTATIC YARN,
245 GSM, TWILL 2/2

| | | | | | | | |
|---|--|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |
| EN 11612 | EN 11611 | EN 1149-5 | EN 13034 | EN 61482-1 | EN 61482-2 | EN 20471 | EN 14116 |
| A1, A2, B1, C1, E3, F1 | Class 1 | EN 1149-3 method 2 | | 10 $\frac{\text{cal}}{\text{cm}^2}$ | Class 1 | | INDEX-3 |

FLAME RETARDANT
ANTISTATIC, MULTI-RISK

COTTON | POLYESTER FABRIC
TRANSPORTATION OF OIL & GAS

Poseidon-245 is a lighter version of our popular fabric Poseidon-300 from XM FireLine range. Cotton rich blend ensures comfort with high quality natural fibers and features durability properties of polyester, such as higher tear and abrasion resistance. This fabric has been developed for use in a broad range of industries including petrochemical, utilities, etc., especially for hot climate countries. Modern 2/2 twill weave is complemented by Belltron® carbon antistatic yarn in a stripe pattern. Flame retardant and antistatic properties provide an excellent protection from risks of Flash Fire and ESD sparks. Poseidon-245 is optimal for summer protective FR clothes for its light weight, comfortable wearing and good level of protection.

XMFIRELINE.COM

OUR PARTNERS



SCAN FOR
DETAILS



POSEIDON-245

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|--------------|---|-----------------------------|--------------------------------------|------------|---------------------------------|--------------------------------|
| POSEIDON-245 | 80% Cotton, 19% Polyester, 1% Antistatic yarn | Carbon (Belltron) | 245 gsm ±5% | Twill 2 /2 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1200 N | 25 N | ≤ 3% | | 25 000 rubs | 4 |
| WEFT | 540 N | 20 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|------------------------|-------------|--------------------------------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 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 |
| WET RUBBING | ISO 105 X12 | 3-4 | 3-4 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4-5 | 3 | 3-4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 3-4 | 4 |

SONORA

80% COTTON, 20% POLYESTER,
185 GSM, PLAIN 1/1

FLAME RETARDANT

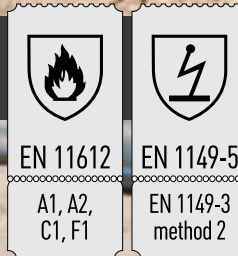
SONORA AS

80% COTTON, 19% POLYESTER,
1% ANTISTATIC YARN, 185 GSM, PLAIN 1/1

COTTON | POLYESTER FABRIC

TRANSPORTATION OF OIL & GAS

Sonora-185 and Sonora-185 AS are light flame retardant fabrics for protective clothing for hot climate. Sonora-185 AS made of 80% cotton, 19% polyester, 1% antistatic yarn with flame retardant finishing. Sonora-185 is made of 80% cotton and 20% polyester with flame retardant finishing. The areas of their use are Transportation of Oil & Gas (pipelines workers), Petrochemical(refineries staff), Utilities (Electrical/Water/Gas service companies personnel) etc. High quality cotton rich blend, improved by addition of polyester, provides that Sonora fr-fabric has a comfort of natural fibers and durability, higher tear resistance and better colorfastness of polyester. Sonora-185 AS has high quality Belltron antistatic yarn embedded in its structure. These carbon stripes give to the wearer extra protection against Static Electricity sparks, which might be dangerous in explosive atmospheres of Refineries or Oil Terminals.



OUR PARTNERS



SCAN FOR
DETAILS



SONORA/SONORA AS

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SONORA

SONORA AS

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|-------------|------------------------------------|------------------------------------|---|--|---------------------------------------|-----------------|
| SONORA | 80% Cotton, 20% Polyester | — | 185gsm ±5% | Plain 1/1 | 150 cm | Flame Retardant |
| SONORA AS | 80% Cotton, 19% Polyester, 1% AS | Carbon (Belltron) | 185gsm ±5% | Plain 1/1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 | |
| WARP | 750 N | 16 N | ≤ 3% | 17 000 rubs | 4 | |
| WEFT | 550 N | 15 N | ≤ 3% | | | |

COLOUR FASTNESS

| | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|---------------------|-------------|-----------------------------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4-5 | 4-5 | 4-5 | 4 |
| WET RUBBING | ISO 105 X12 | 4 | 3 | 3 | 3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 4 | 4 | 4 |

VOLCANO

50x WASH*

87% COTTON , 12% NYLON,
1% ANTISTATIC YARN,
260 GSM, SATIN 4/1

| | | | | | |
|------------------------|----------|--------------------|----------|------------------------|------------|
| | | | | | |
| EN 11612 | EN 11611 | EN 1149-5 | EN 13034 | EN 61482-1 | EN 61482-2 |
| A1, A2, B1, C1, E3, F1 | Class 1 | EN 1149-3 method 2 | | 12 cal/cm ² | Class 1 |

FLAME RETARDANT
ANTISTATIC, MULTI-RISK

COTTON/NYLON FABRIC | OIL & GAS

Volcano is an innovative flame retardant cotton-nylon blend being extremely tear resistant yet relatively light. Durability of this fabric sufficiently increases life cycle of flame retardant garment. Weighing only 260 gsm Volcano fabric doesn't cut any corners in protective measures and meets high requirements of electric arc protection with 12 cal/cm² (defined by ISO 61482-1-1). It's also certified to ISO 11611 and ISO 11612 standards for protective clothing. Moreover, Volcano has additional Multi-Risk treatment which protects against acids, oil, grease and repels water. Multi-Risk properties are confirmed by ISO 13034 certificate.

[*] Tested in accordance to ISO 15025 after 50 industrial washes at 75 °C

OUR PARTNERS



SCAN FOR
DETAILS



VOLCANO

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|---------|---|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| VOLCANO | 87% Cotton, 12% Nylon, 1% Antistatic yarn | Carbon (Belltron) | 260 gsm ±5% | Satin 4 / 1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 860 N | 19 N | ≤ 3% | 28 000 rubs | 3 | |
| WEFT | 670 N | 33 N | ≤ 3% | | | |

COLOUR FASTNESS

| | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|-------------|-------------|--------------------------------|-------|
| | | Orange, Red | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 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 |
| WET RUBBING | ISO 105 X12 | 3-4 | 3-4 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4-5 | 3 | 3-4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 3-4 | 4 |

FR-LINING

100% COTTON

160 GSM, FR-PLAIN 1/1



EN 14116

INDEX-3

FLAME RETARDANT

COTTON FABRIC | FIREFIGHTERS

A very light flame retardant fabric made of 100% cotton with density of 160 g/m² and plain 1/1 weave. Thin, soft and pleasant to touch, yet durable and flame retardant.

Flame retardant lining is indispensable in the fr-clothing with membrane layers, such as in fire fighting coversals and suits. It can also be used for warm winter fr-clothing (jacket and trousers).

Internal lining fabric is an integral part of the heat protective package, and performs several functions: isolating membrane, protecting against abrasion, increases protection against heat and provides additional comfort of worker.



OUR PARTNERS



SCAN FOR
DETAILS



FR-LINING

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|-----------|-----------------------------|-----------------------------|--------------------------------------|------------|---------------------------------|--------------------------------|
| FR-Lining | 100% Cotton | — | 160 gsm ±5% | Plane 1 /1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 710 N | 16 N | ≤ 3% | | 35 000 rubs | 4 |
| WEFT | 470 N | 13 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|---------------------|-------------|-----------------------------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4 | 4 |
| STAIN ON COTTON | | 4 | 4 | 4 | 3-4 |
| WET RUBBING | ISO 105 X12 | 4-5 | | | |
| DRY RUBBING | ISO 105 X12 | 2 | | | |
| LIGHT | ISO 105 B02 | > 4 | | | |



FLAME RETARDANT FABRIC FOR FR-CLOTHING

ARAVIS-120

50% META ARAMID, 50% FR VISCOSE
120GSM, FR-PLAIN 1/1



EN 11612
A1, A2,
C1, F1

INHERENT

META ARAMID FABRIC | FR-TURNOUT GEAR

Aravis FR-liner is designed for fire fighter firefighter's clothing with a new level of moisture management properties. It is light, thin and inherently flame resistant.

The purpose of thermal liner is to be used as a part of 4-layer sandwich for firefighter's turnout gear. Aravis-120 FR-liner provides comfort for the wearer as it thin and light (120 gsm). At the same time Aravis-120 transports perspiration away from skin. The blend of aramid and viscose fibers makes Aravis-120 very durable. It also gives high level of thermo protection, due to its inherent Flame Retardant properties.



XMFIRELINE.COM

OUR PARTNERS



SCAN FOR
DETAILS



ARAVIS-120

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION




| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|------------|------------------------------------|-----------------------------|--------------------------------------|--------------|---------------------------------|--------------------------------|
| ARAVIS-120 | 50% Meta-Aramid, 50% FR-Viscose | — | 120 gsm ±5% | FR-Plain 1/1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 420 N | 20 N | ≤ 3% | | — | — |
| WEFT | 400 N | 20 N | ≤ 3% | | — | — |

COLOUR FASTNESS

| | | MELANGE GREY |
|--------------------|-----------------------------|--------------|
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 |
| STAIN ON POLYESTER | | 4-5 |
| STAIN ON COTTON | | 4 |
| WET RUBBING | ISO 105 X12 | 4-5 |
| DRY RUBBING | ISO 105 X12 | 4 |
| LIGHT | ISO 105 B02 | 4 |

ARTEX-210

93% M-ARAMID, 5% P-ARAMID,
2% ANTISTATIC
210 GSM, TWILL 2/1

| | | |
|---|---|--|
|  |  |  |
| EN 11612 | EN 1149-5 | EN 469 |
| A1, A2, B1 C1, F1 | EN 1149-3 method 2 | |

INHERENT, ANTISTATIC

ARAMID FABRIC | INHERENT FR-CLOTHING

Artex-210 is an innovative inherent flame resistant fabric for protective and fr-clothing. This fabric is best used for emergency services (EMS clothing), for firefighters gear as well as for special forces, for marines uniform, for military pilots flight suits. Artex-210 is also suitable for FR bibs and FR overalls for workers in the oil and gas, chemical and power industries.

Artex-210 fabric provides protection against Fire, open Flame and Electric Arc. Inherent thermal protection cannot be washed away. The fabric is very durable and super resistant to abrasion.

Between other features of Artex-210 are light weight and good breathability, which gives extra comfort to the wearer. Due to integrated carbon antistatic yarn, Artex prevents building up electrostatic discharge (ESD) and eliminates the possibility of explosion in oil, gas and other industries.



OUR PARTNERS



SCAN FOR
DETAILS



ARTEX-210

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.






SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|-----------|--|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| ARTEX-210 | 93% M-Aramid, 5% P-Aramid, 2% antistatic | Carbon (Belltron) | 210 gsm ±5% | Twill 2 / 1 | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1400 N | 50 N | ≤ 3% | — | — | — |
| WEFT | 1500 N | 49 N | ≤ 3% | — | — | — |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|------------------------|-------------|--------------------------------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON COTTON | | 4 | 4-5 | 4-5 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 4 | 4 |

MURANO-250

60% MODACRYLIC, 35% COTTON,
4% NYLON, 1% AS,
250 GSM, RIP-STOP

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| EN 11612 | EN 11611 | EN 1149-5 | EN 13034 | EN 61482-1 |
| A1, A2, B1, C1, E1, F1 | Class 1 | EN 1149-3 method 2 | | 6,9 cal/cm ² |

INHERENT, ANTISTATIC

MODACRYLIC | MACHINE BUILDING

Murano-250 is a modacrylic fabric for fr-clothing. Made with modacrylic-cotton blend it has inherently flame retardant composition. It also includes nylon for more durability and antistatic fibers to avoid static electricity. Murano-250 is a very comfortable and versatile fr-fabric for long lasting protective performance.



OUR PARTNERS



SCAN FOR DETAILS



MURANO-250

AVAILABLE COLOURS:*

BLACK #128-01

GREY #128-02

DARK NAVY #124-01

RED #128-06

ROYAL BLUE #128-04

ORANGE #128-07

GREEN #128-03

YELLOW #128-11

* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

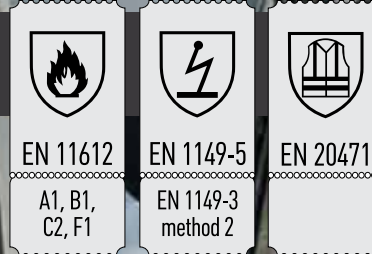
SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|------------|--|-----------------------------|--------------------------------------|---------------------------------|--------------------------------|--------------------|
| MURANO-250 | 60% Modacrylic, 35% Cotton, 4% nylon, 1% Antistatic | Carbon (Belltron) | 250 gsm ±5% | Rip-Stop | 150 cm | Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 | |
| WARP | 780 N | 54 N | ≤ 3% | 21 000 rubs | 4 | |
| WEFT | 600 N | 36 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|------------------------|-------------|-----------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON POLYESTER | | 4-5 | 4-5 | 4-5 | 4 |
| STAIN ON COTTON | | 4 | 4-5 | 4-5 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3 | 3 | 3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4 | 4 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 4 | 4 |

FR-FLEECE-280

60% MODACRYLIC, 39% COTTON,
1% ANTISTATIC YARN,
280 GSM, KNITTED



INHERENT, ANTISTATIC

MODACRYLIC | WINTER FR-CLOTHING

FR-Fleece is designed to use the softness and warmth of Fleece fabric with adding some extra features such as Heat and Flame Resistance. We use 60% Modacrylic fibers and 39% Cotton together with 1% Antistatic carbon fibers to get our 280gsm FR-Fleece. The part of Modacrylic fibers interwoven with Cotton provides to the the whole fabric its flame resistance. FR-Fleece can be used as a middle layer or warmer for winter fr-clothing.

OUR PARTNERS



SCAN FOR
DETAILS



FR-FLEECE-280

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|---------------|--|----------------------|---|---------|--------------|--------------------|
| FR-FLEECE-280 | 60% Modacrylic, 39% Cotton, 1% Antistatic yarn | Carbon (Belltron) | 280 gsm ±5% | Knitted | 150 cm | Flame Retardant |
| | Bursting Resistance ISO 13938-1 | | Shrinkage ISO 5077 after 5 washes | | | |
| WARP | 232 kPa | | ≤ 5% | | | |
| WEFT | | | | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|-------------|-------------|-----------|-------|
| | | HiVizYellow | Green, Grey | Dark Navy | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 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 |
| WET RUBBING | ISO 105 X12 | 3-4 | 3-4 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4-5 | 3 | 3-4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 3-4 | 4 |

FR-JERSEY-200C

50 X WASH*

60% MODACRYLIC, 38% COTTON,
2% ANTISTATIC YARN,
200 GSM, KNITTED

| | | | |
|--|---|---|---|
|  |  |  |  |
| EN 11612 | EN 1149-5 | EN 61482-2 | EN 20471 |
| A1, A2, B1, C1, F1 | EN 1149-3 method 2 | Class 1 | |

INHERENT, ANTISTATIC

MODACRYLIC FABRIC | THERMAL CLOTHING

Flame retardant fabric FR-Jersey-200C 60% Modacrylic, 38% Cotton, 2% AS 200gsm is used for fr base layer (FR underwear). This FR knitted fabric with antistatic properties helps to save body warmth and increase flame retardant and thermal protection while wearing under fr-clothing (fr-jacket and fr-pants).

(*) Tested after 50 domestic washes at 40 °C

OUR PARTNERS



SCAN FOR DETAILS



FR-JERSEY-200C

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|----------------|---|----------------------|---|----------------|--------------|--------------------|
| FR-JERSEY-200C | 60% Modacrylic, 38% Cotton, 2% Antistatic | Carbon (Belltron) | 200 gsm ±5% | Knitted fabric | 155 cm | Flame Retardant |
| | Bursting Resistance ISO 13938-1 | | Shrinkage ISO 5077 after 5 washes | | | |
| WARP | 202 kPa | | ≤ 5% | | | |
| WEFT | | | | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|-----------------|-------------|-----------|-------|
| | | HiViz Yellow | Green, Grey | Dark Navy | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 3-4 | 4 | 4-5 | 3 |
| STAIN ON COTTON | | 4 | 4-5 | 4-5 | 3-4 |
| WET RUBBING | ISO 105 X12 | 3-4 | 3-4 | 3 | 3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4-5 | 4-5 | 3-4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 4 | 4 |

FR-PIQUE-230

50x
WASH*

60% MODACRYLIC
38% COTTON, 2% AS
230 GSM, KNITTED

| | | | |
|--------------------|--------------------|-----------------------|----------|
| | | | |
| EN 11612 | EN 1149-5 | EN 61482-1 | EN 20471 |
| A1, A2, B1, C1, F1 | EN 1149-3 method 2 | 8 cal/cm ² | |

INHERENT, ANTISTATIC

MODACRYLIC | MACHINE BUILDING

The high level of demand for pique fabric is explained by excellent flame-resistant, moisture-regulating, antistatic properties. Pique perfectly holds its shape and is practical. Advantages: good creasing resistance, an excellent degree of wear resistance, the fabric has hygroscopicity, good breathability, easy to care for. Additionally, FR-Pique protects against industrial hazards such as arc flashover and static electricity.

(*) Tested after 50 domestic washes at 40 °C

OUR PARTNERS



SCAN FOR
DETAILS



FR-PIQUE-230

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.
This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.






SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|--------------|---|----------------------|--|----------------|--------------|-----------------|
| FR-PIQUE-230 | 60% Modacrylic, 38% Cotton, 2% Antistatic | Carbon (Belltron) | 230 gsm ±5% | Knitted Fabric | 165 cm | Flame Retardant |
| | Bursting Resistance ISO 13938-1 | | Shrinkage ISO 5077 after 5 washes | | | |
| WARP | 190 kPa | | ≤ 5% | | | |
| WEFT | | | | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|--------------|-------------|-----------|-------|
| | | HiViz Yellow | Green, Grey | Dark Navy | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 3-4 | 4 | 2-3 | 4 |
| STAIN ON COTTON | | 4 | 4-5 | 4 | 4 |
| WET RUBBING | ISO 105 X12 | 3-4 | 3-4 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4-5 | 3 | 4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 3-4 | 4 |

FR-OXFORD-250

98% POLYESTER, 2% ANTISTATIC YARN,
250 GSM, PLAIN 1/1

| | | | | |
|---|--|---|---|---|
|  |  |  |  |  |
| EN 14116 | EN 1149-5 | EN 343 | EN 13034 | EN 20471 |
| Index 1 | EN 1149-3 method 2 | Class 3 | | |

FLAME RETARDANT, ANTISTATIC,
OIL & WATER REPELLENT, BREATHABLE

POLYESTER FABRIC | FR-RAINWEAR

FR-Oxford is a water resistant outerwear fabric with flame retardant properties. Additionally it has antistatic, water, oil and stain resistant properties. Flame Retardant PU (Polyurethane) lamination provides superior rain protection and breathability. The fabric is designed for flame retardant winter workwear, rain jackets for jobs where multi-norm protection is needed. Besides regular colours FR-Oxford is available in Hi-Viz orange and yellow.



OUR PARTNERS



SCAN FOR
DETAILS



FR-OXFORD-250

AVAILABLE COLOURS:*



* Actual colours of fabric may vary.

This is due to the fact that colours on paper look different than colours on real fabric.

CARE INSTRUCTIONS:



Keep in cool dry place, with no direct sunlight.

SPECIFICATION

| Article | Composition | Antistatic | Weight | Weave | Usable width | Finishes |
|---------------|--------------------------------------|-----------------------------|--------------------------------------|-------------|---------------------------------|--------------------------------|
| FR-OXFORD-250 | 98% Polyester, 2% Antistatic yarn | Carbon (Belltron) | 250 gsm ±5% | Plain 1 / 1 | 150 cm | (PU) Flame Retardant |
| | Tensile str. ISO 13934-1 | Tearing str. ISO 13937-2 | Shrinkage ISO 5077 after 5 washes | | Abrasion Resist. ISO 12947-2 | Pilling Resist. ISO 12945-2 |
| WARP | 1300 N | 100 N | ≤ 3% | 20 000 rubs | 4-5 | |
| WEFT | 1200 N | 84 N | ≤ 3% | | | |

| COLOUR FASTNESS | | LIGHT | MID | DARK | |
|--------------------|-----------------------------|---------------------|-------------|-----------------------------|-------|
| | | Orange, Red, Yellow | Green, Grey | Dark Navy, Navy, Royal Blue | Black |
| COLOUR CHANGE | WASHING 60°C ISO 105 C06 | 4-5 | 4-5 | 4-5 | 4-5 |
| STAIN ON POLYESTER | | 3-4 | 4 | 3-4 | 3-4 |
| STAIN ON COTTON | | 4 | 4-5 | 4-5 | 4-5 |
| WET RUBBING | ISO 105 X12 | 3-4 | 3-4 | 2-3 | 2-3 |
| DRY RUBBING | ISO 105 X12 | 4-5 | 4-5 | 4 | 4 |
| LIGHT | ISO 105 B02 | 3 | 3-4 | 4 | 4 |

FABRIC SWATCH CARD



Black #128-01

Grey #128-02

Dark Navy #128-01

Royal Blue #128-04

Green #128-08



Red #128-06

Orange #128-07

Yellow HI-VIZ #128-08

Red #228-06

Orange #228-07



FLAME RETARDANT
for FR-CLOTHING

Fabric

MADE TO LAST
50 x 75°C WASH



EN 11612



aitex[®]
textile research institute





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