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 and garments in 51 countries. XM FireLine™ represented offices in Asia (in Shanghai), Europe (in China, Romania, Spain, Portugal, Poland and Russia) and South America (in Sao-Paulo).

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

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

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

WHY CHOOSE OUR FR-FABRICS?

you 100% quality.

are also certified to EN 1149-5 for Anti-Static

All our FR-fabrics resist 50/100 wash cycles

make per order.

in stock in 6 main shades. Other 6 fr-fabrics we have in stock in 6 main shades.

our product range and 12 of them we have always

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**GEFEST-480**

100% COTTON, 480 GSM, SATIN 5/2

**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 its fantastic tear and tensile strength. The fabric is so strong that it is 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 the smooth surface instead of sticking to it which 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).

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

**OUR PARTNERS**

GEFEST-480

AVAILABLE COLOURS:

- BLACK #128-01
- GREY #128-32
- NAVY #124-01
- RED #138-04
- RAINBOW #138-07
- GREEN #128-02
- YELLOW #128-11

**CARE INSTRUCTIONS:**

- Keep in cool dry place, with no direct sunlight.

**SPECIFICATION**

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Usable width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEFEST-480</td>
<td>100% Cotton</td>
<td>480 gsm ±5%</td>
<td>150 cm</td>
<td></td>
<td>Flame Retardant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Warp</th>
<th>Weft</th>
<th>Spec.</th>
<th>Fab.</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile strength</td>
<td>1900 N</td>
<td>80 N ≤ 3%</td>
<td>35 000 rubs 4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Tearing strength</td>
<td>1200 N</td>
<td>110 N ≤ 3%</td>
<td>44</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Shrinkage</td>
<td>ISO 5077</td>
<td>5 Washes</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Abrasion Resist.</td>
<td>ISO 12947-2</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Pilling Resist.</td>
<td>ISO 12945-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COLOUR FASTNESS**

<table>
<thead>
<tr>
<th>Colour</th>
<th>LIGHT</th>
<th>MED</th>
<th>DARK</th>
<th>BLACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Red</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Yellow</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Green</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Grey</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Dark Navy</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Royal Blue</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Black</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

*Gefest-480 is a soft fabric which makes comfortable garments and provides protection from heat and flame (ISO 11611 & ISO 11612 certified).
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.

**Available Colours:**

- BLACK #128-01
- GREY #128-32
- DARK NAVY #124-01
- RED #128-06
- ROYAL BLUE #128-04
- ORANGE #128-07
- GREEN #128-03
- YELLOW #128-11

**Care Instructions:**

- Keep in cool dry place, with no direct sunlight.

**Colour Fastness:**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Orange, Red, Yellow</th>
<th>Green</th>
<th>Grey, Blue</th>
<th>Dark Grey, Navy Blue</th>
<th>Royal Blue</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIGHT</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>DARK</td>
<td>3</td>
<td>3</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
<td>2.5</td>
</tr>
</tbody>
</table>

**Tensile strength:**

- Warp (ISO 61482-1) 1550 N ± 300
- Weft (ISO 61482-1) 1300 N ± 300

**Shrinkage (ISO 5077):**

- 3.5 ± 3%

**Abrasion Resist. (ISO 12947-2):**

- Tearing str. (ISO 13977) 31
- Tearing str. (ISO 13977) 300

**Pilling Resist. (ISO 12945-2):**

- 4
FLAME RETARDANT FABRIC FOR FR-CLOTHING

COLOMBO

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

FLAME RETARDANT, ANTISTATIC

COTTON FABRIC | WELDING

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

(*) Tested in accordance to ISO 15025 after 100 industrial washes at 75°C

COLOMBO

AVAILABLE COLOURS:

BLACK #128-01
OREG #128-32
DARK NAVY #124-01
RED #128-06
ROYAL BLUE #128-04
FRANCE #128-07
GREEN #128-03
YELLOW #128-11

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(*) Tested in accordance to ISO 15025 after 100 industrial washes at 75°C

SPECSIFICATION

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>COLombo</td>
<td>99% Cotton, 1% Anti-static Yarn, Carbon (Belltron)</td>
<td>Carbon (Belltron)</td>
<td>350 gsm ±5%</td>
<td>Twill 2/2</td>
<td>Flame Retardant</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Article</th>
<th>Tensile strength</th>
<th>Tear strength</th>
<th>Shrinkage</th>
<th>Abrasion Resistance</th>
<th>Pilling Resistance</th>
<th>COLOUR FASTNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warp</td>
<td>1500 N</td>
<td>42 N</td>
<td>≤ 3%</td>
<td>26,000 rubs</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Weft</td>
<td>900 N</td>
<td>32 N</td>
<td>≤ 3%</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>COLOUR</th>
<th>LIGHT</th>
<th>MEDIUM</th>
<th>DARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Navy</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Royal Blue</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Yellow</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

---

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>WEAR RESISTANCE</th>
<th>SCRATCH RESISTANCE</th>
<th>STAIN RESISTANCE</th>
<th>DURABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Navy</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Royal Blue</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Yellow</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>
ETNA
99% COTTON, 1% ANTISTATIC YARN, 350 GSM, SATIN 4/1

FLAME RETARDANT, ANTISTATIC

COTTON FABRIC | OIL & GAS

Etta is a 350 gsm middelweight quality cotton fabric with a flame retardant finishing designed for garments used in metallurgy. Etta FR Fabric has the highest level of protection from molten metal splashes with CE in accordance to ISO 9185. Satin weave of Etta fabric is very useful on protective overalls, bibs and aprons for welders and other workers making molten metal drops slide off 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 anti-static yarn woven in stripes makes garments absolutely safe to wear in explosive environment and ensures the necessary charge decay.

SPECIFICATION

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Width</th>
<th>Tensile strength</th>
<th>Tearing strength</th>
<th>Shrinkage ISO 5077 after 5 washes</th>
<th>Abrasion Resist. ISO 12947-2</th>
<th>Pilling Resist. ISO 12945-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETNA</td>
<td>99% Cotton, 1% Antisatc Yarn, Carbon (Belltron)</td>
<td>350 gs ±5%</td>
<td>150 cm</td>
<td>Flame Retardant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tensile</td>
<td>ISO 13934-1</td>
<td>1200 N</td>
<td>30 N ≤ 3%</td>
<td>21000 rubs</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tearing</td>
<td>ISO 13937-2</td>
<td>700 N</td>
<td>55 N ≤ 3%</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shrinkage</td>
<td>ISO 5077-2 after 5 washes</td>
<td>≤ 3%</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LIGHT ISO 105 B02 |

3 4 3 4

STAIN ON POLYESTER |

4 4 4 4

STAIN ON COTTON |

4 4 4 4

TENSILE STRENGTH |

ISO 105 C06 |

4-5 4-5 4-5 4-5

STAIN ON POLYESTER |

4-5 4-5 4-5 4-5

STAIN ON COTTON |

4 4 4 4

NBS RINSING 80° |

ISO 105 C06 |

2.5 3 3 3

RESIDUAL |

ISO 105 C06 |

2.5 2.5 2.5 2.5

ARTICLE |

ETNA |

4 4 4 4

EKB37031 |

4 4 4 4

ETNA FR FABRIC FOR FR-CLOTHING

LIGHT |

ISO 105 B02 |

4 4 4 4

FAD, GRAY |

ISO 105 G02 |

4 4 4 4

COLOR FASTNESS |
**FLAME RETARDANT FABRIC FOR FR-CLOTHING**

**MADEIRA-320**

100% COTTON, 320 GSM, TWILL 3/1

**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. With ATPV (Arc Thermal Protective Value) of 13 cal/cm² fabric conforms to HRC 2 (Hazard Risk Category, NFPA 70E).

**SPECIFICATION**

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Weave</th>
<th>Double width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MADEIRA-320</td>
<td>100% Cotton</td>
<td>–</td>
<td>320 gsm ±5%</td>
<td>Twill 3/1</td>
<td>150 cm</td>
<td>Flame Retardant</td>
</tr>
</tbody>
</table>

**TENSILE STRENGTH ISO 13934-1**

<table>
<thead>
<tr>
<th>Warp</th>
<th>1500 N</th>
<th>45 N</th>
<th>≤ 3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weft</td>
<td>800 N</td>
<td>40 N</td>
<td>≤ 3%</td>
</tr>
</tbody>
</table>

**ABRASION RESIST. ISO 12947-2**

<table>
<thead>
<tr>
<th>Warp</th>
<th>26 500 rubs</th>
<th>3-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weft</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**PILLING RESIST. ISO 12945-2**

<table>
<thead>
<tr>
<th>Warp</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weft</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**STAIN RESIST.**

- **On POLYESTER:** 4-5 4-5 4-5 4-5
- **On COTTON:** 4-4 4-4

**WASHING RESIST.**

- **60°C ISO 105 C06:** 4-5 4-5 4-5 4-5
- **ISO 105 X12:** 3 3 2-3 2-3
- **TENSILE STR. ISO 13934-1:** 26 500 rubs 3-4
- **ABRASION RESIST. ISO 12947-2:** 26 500 rubs 3-4

**MADEIRA-320**

**AVAILABLE COLOURS:**

- **BLACK #128-01**
- **RED #128-06**
- **ROYAL BLUE #128-04**
- **FRANKIE #128-07**
- **GREEN #128-03**
- **YELLOW #128-11**

**COLOUR FASTNESS**

- **Light, Red, Yellow:** 4-5 4-5 4-5 4-5
- **Medium, Gray:** 4-4 4-4 4-4 4-4
- **Dark, Navy, Royal Blue:** 3 3 2-3 2-3
- **Black:** 4 4 4 4

**COLOUR CHANGES**

- **WASHING A/P** ISO 105 G02
- **STAIN ON POLYESTER:** 4 4 4 4
- **STAIN ON COTTON:** 4 4 4 4
- **NET FRAYING:** ISO 105 K02
- **RAY FRAYING:** ISO 105 R02
- **LIGHT:** ISO 105 R02

**Actual colors of fabric may vary.** Due to the fact that colors on paper look different than colors on real fabric.
**Madeira-320 AS**

**COTTON FABRIC | MACHINE BUILDING**

Madeira-320 AS is a flame retardant fabric made of long staple cotton with anti-static 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. With ATPV (Arc Thermal Protective Value) of 13 cal/ cm² fabric conforms to EN 11612 (Flame Risk Category, NFPA 70E).

**Specifications**

- **Article**: Madeira-320 AS
- **Composition**: 99% Cotton, 1% Antistatic yarn
- **Antistatic Weight**: Carbon (Belltron) 320 gsm ±5%
- **Weave**: Twill 3/1
- **Usable width**: 150 cm
- **Finishes**: Flame Retardant

**Colour Fastness**

- **Light ISO 105-A02**: Orange, Yellow, Brown, Grey, Black 4-5
- **Wet ISO 105-A02**: Orange, Yellow, Brown, Grey, Black 4-5
- **Dry ISO 105-A02**: Orange, Yellow, Brown, Grey, Black 4-5

**Care Instructions**

- **Wash**: Keep in cool dry place, with no direct sunlight.
- **Stain on polyester**: 4-5 4-5 4-5 4-5
- **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**

**Available Colours:**

- **Black #128-01**
- **Dark Navy #124-01**
- **Red #128-06**
- **Royal Blue #128-04**
- **Orange #128-07**
- **Yellow #128-11**

*Actual colours of fabric may vary. This is due to the fact that colors on paper look different than colors on real fabric.*
MADEIRA-260
100% COTTON, 260 GSM, TWILL 3/1

COTTON FABRIC | MACHINE BUILDING
Madeira-260 is a flame retardant fabric made of long staple cotton. It can be used for lightweight and mediumweight clothing in heavy machinery, automotive industry, etc. Protective clothing made of Madeira-260 FR fabric provides wearers 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.

SPECIFICATION
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MADEIRA-260</td>
<td>100% Cotton</td>
<td></td>
<td>260 gsm ±5%</td>
<td>Twill 3/1</td>
<td>150cm</td>
<td>≤ 3%</td>
<td>1200 N</td>
<td>32 N ≤ 3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MADEIRA-260 is a flame retardant fabric made of long staple cotton. It can be used for lightweight and mediumweight clothing in heavy machinery, automotive industry, etc. Protective clothing made of Madeira-260 FR fabric provides wearers 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.

COLOUR FASTNESS
<table>
<thead>
<tr>
<th>LIGHT</th>
<th>MEDIUM</th>
<th>DARK</th>
<th>BLACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change</td>
<td>Green, Grey</td>
<td>Black</td>
<td>Royal Blue</td>
</tr>
<tr>
<td>Change</td>
<td>4-5</td>
<td>4-5</td>
<td>4-5</td>
</tr>
</tbody>
</table>

MADEIRA-260 AVAILABLE COLOURS *
BLACK #120-01
GREY #120-32
DARK NAVY #124-01
RED #128-06
ROYAL BLUE #128-04
ORANGE #128-07
GREEN #128-03
YELLOW #128-11

Abstainence of color may vary. Thus please test the fabrics on your own work before actual production.*

CARE INSTRUCTIONS:
Keep in cool dry place, with no direct sunlight.
FIJI

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

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 vests, shirts, light pants or even light overalls for hot climates. 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 comfortable 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.

FLAME RETARDANT, ANTISTATIC

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 vests, shirts, light pants or even light overalls for hot climates. 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 comfortable 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.

FIJI

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

COTTON FABRIC | LIGHTWEIGHT UNIFORM

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FIJI

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

COTTON FABRIC | LIGHTWEIGHT UNIFORM

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FIJI

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

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 vests, shirts, light pants or even light overalls for hot climates. 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 comfortable 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.

FIJI

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

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 vests, shirts, light pants or even light overalls for hot climates. 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 comfortable 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.

FIJI

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

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 vests, shirts, light pants or even light overalls for hot climates. 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 comfortable 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.
**FLAME RETARDANT FABRIC FOR FR-CLOTHING**

**POSEIDON-245**

- **80% COTTON, 19% POLYESTER, 1% ANTISTATIC FABRIC**
- **245 GSM, TWILL 2/2**
- Flame Retardant
- Antistatic, Multirisk

**COTTON/POLYESTER FABRICS**

**TRANSPORTATION OF OIL & GAS**

**POSEIDON-245**

- **AVAILABLE COLOURS:**
  - BLACK #128-01
  - GREY #128-32
  - DARK NAVY #124-01
  - RED #128-06
  - ROYAL BLUE #128-04
  - ORANGE #128-07
  - GREEN #128-03
  - YELLOW #128-11

**CARE INSTRUCTIONS:**

- Keep in cool dry place, with no direct sunlight.

**SPECIFICATION**

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Width</th>
<th>Finish</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSEIDON-245</td>
<td>80% Cotton, 19% Polyester, 1% Antistatic yarn</td>
<td>Carbon (Belltron)</td>
<td>245 gsm ±5%</td>
<td>150 cm</td>
<td>Flame Retardant</td>
</tr>
</tbody>
</table>

**Tensile Strength:**

- **WARP:** 1350 N
- **WEFT:** 600 N

**Tearing Strength:**

- **WARP:** 28 N ≤ 3%
- **WEFT:** 24 N ≤ 3%

**Shrinkage:**

- **ISO 5077 after 5 washes**

**Abrasion Resistance:**

- **ISO 12947-2**

**Pilling Resistance:**

- **ISO 12945-2**

**COLOUR FASTNESS:**

<table>
<thead>
<tr>
<th>LIGHT</th>
<th>MEDIUM</th>
<th>DARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>Red</td>
<td>Black</td>
</tr>
</tbody>
</table>

- **WASHING 60°C**
  - **ISO 105 C06**
  - **4-5 4-5 4-5 4-5**

- **STAIN ON POLYESTER**
  - **ISO 105 E04**
  - **3-4 4 3-4 3-4**

- **STAIN ON COTTON**
  - **ISO 105 E04**
  - **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**

**EN 1149-3 method 2**

- **A1, A2, B1, C1, E3, F1**

(*) Tested in accordance to ISO 15025 after 100 industrial washes at 75°C

**Partners:**

**POSEIDON-245**

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 anti-static yarn in a stripe pattern. Flame retardant and anti-static 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**
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.

**FLAME RETARDANT FABRIC FOR FR-CLOTHING**

**POSEIDON-300**

<table>
<thead>
<tr>
<th>Article Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Weave</th>
<th>Usable width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poseidon-300</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80% Cotton, 19% Polyester, 1% Antistatic Yarn</td>
<td>Flame Retardant</td>
<td>300gsm ±5%</td>
<td>Twill 2/2</td>
<td>150cm</td>
<td></td>
</tr>
</tbody>
</table>

**Specifications**

<table>
<thead>
<tr>
<th>Property</th>
<th>Warp Str.</th>
<th>Weft Str.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>ISO 13934-1</td>
<td>1500 N  40 N ≤ 3%</td>
</tr>
<tr>
<td>Tearing Strength</td>
<td>ISO 13937-2</td>
<td>28 300 rubs 4</td>
</tr>
<tr>
<td>Shrinkage</td>
<td>ISO 5077</td>
<td>≤ 5%</td>
</tr>
<tr>
<td>Abrasion Resistance</td>
<td>ISO 12947-2</td>
<td>4-5</td>
</tr>
<tr>
<td>Pilling Resistance</td>
<td>ISO 12945-2</td>
<td>4-5</td>
</tr>
</tbody>
</table>

**Warp**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colour Fastness</td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td>Mid</td>
</tr>
<tr>
<td>Orange, Red, Yellow</td>
<td>4</td>
</tr>
<tr>
<td>Green</td>
<td>Grey</td>
</tr>
<tr>
<td>White</td>
<td>4-5</td>
</tr>
</tbody>
</table>

**Tested in accordance to ISO 15025 after 100 industrial washes at 75°C**

**Available Colours**

- BLACK #138-01
- DARK NAVY #124-01
- RED #128-06
- ROYAL BLUE #138-04
- ORANGE #138-07
- YELLOW #126-06

**CARE INSTRUCTIONS:**

- Keep in cool dry place, with no direct sunlight.

**COLOUR CHANGES**

- STAIN ON POLYESTER: 4-5
- STAIN ON COTTON: 4
- SALT STAIN: 3-4
- PARAFFIN: 3-4

**COLOUR RESISTANCE**

- LIGHT: 4-5
- MEDIUM: 4-5
- DARK: 4-5

**WEIGHT**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass</td>
<td>300 g/m²</td>
</tr>
<tr>
<td>Twill 2/2</td>
<td>150cm</td>
</tr>
</tbody>
</table>

**FLAME RETARDANT**

Antistatic, Multi-Risk

COTTON/POLYESTER FABRICS

TRANSPORTATION OF OIL & GAS

**POSEIDON-300 AVAILABLE COLOURS:**
SONORA is a light flame retardant fabric for protective clothing for hot climate. SONORA 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 AS

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

FLAME RETARDANT, ANTISTATIC

COTTON/POLYESTER FABRICS
TRANSPORTATION OF OIL & GAS

SONORA AS is a light flame retardant fabric for protective clothing in hot climate. It is made of 80% cotton, 19% polyester and 1% anti-static yarn with flame retardant finishing. Protective clothing made of Sonora AS is used in oil and gas industry (pipeline work), petrochemical (refinery staff), utilities (energy/water/gas service personnel), etc. High quality cotton rich blend of Sonora gives the wearer comfort of natural fibers and is improved by addition of polyester for higher tear. Sonora AS has a high quality Belltron® AS yarn embedded in its structure in stripes which gives the wearer protection against Electrostatic Discharge in dangerous and explosive environment at refineries and oil terminals.

SONORA AS

AVAILABLE COLOURS *

BLACK #128-01
GREY #128-32
DARK NAVY #124-01
RED #128-06
ROYAL BLUE #128-04
ORANGE #128-03
YELLOW #128-11

FLAME RETARDANT FABRIC FOR FR-CLOTHING

SPECIFICATION

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Width</th>
<th>Shrinkage (%)</th>
<th>Abrasion Resistant</th>
<th>ISO 12947-2</th>
</tr>
</thead>
<tbody>
<tr>
<td>SONORA AS</td>
<td>80% Cotton, 19% Polyester, 1% Antistatic yarn</td>
<td>Carbon/Belltron</td>
<td>185gsm ±5%</td>
<td>Plain 1/1</td>
<td>150cm</td>
<td>Flame Retardant</td>
<td></td>
</tr>
</tbody>
</table>

Tensile Strength

<table>
<thead>
<tr>
<th></th>
<th>Warp</th>
<th>Weft</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 13934-1</td>
<td>750 N</td>
<td>430 N</td>
</tr>
<tr>
<td>ISO 13937-2</td>
<td>19 N</td>
<td>18 N</td>
</tr>
<tr>
<td>≤ 3%</td>
<td>≤ 3%</td>
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</table>

Weakening

<table>
<thead>
<tr>
<th></th>
<th>Warp</th>
<th>Weft</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 12947-2</td>
<td>17,000 rubs</td>
<td>4,000 rubs</td>
</tr>
</tbody>
</table>

COLOUR FASTNESS

<table>
<thead>
<tr>
<th>Article</th>
<th>LIGHT</th>
<th>MEDIUM</th>
<th>DARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>SONORA AS</td>
<td>Orange, Red, Yellow</td>
<td>Beige, Grey</td>
<td>Dark Grey, Navy Blue, Royal Blue</td>
</tr>
<tr>
<td>GREY #128-32</td>
<td>4</td>
<td>4-5</td>
<td>4-5</td>
</tr>
<tr>
<td>BLACK #128-01</td>
<td>4</td>
<td>4-5</td>
<td>4-5</td>
</tr>
<tr>
<td>ROYAL BLUE #128-04</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>DARK NAVY #124-01</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

COLOUR CHANGE

<table>
<thead>
<tr>
<th>Article</th>
<th>Wash</th>
<th>Wet Rubbing</th>
</tr>
</thead>
<tbody>
<tr>
<td>SONORA AS</td>
<td>4-5</td>
<td>4-5</td>
</tr>
<tr>
<td>GREY #128-32</td>
<td>4</td>
<td>4-5</td>
</tr>
<tr>
<td>BLACK #128-01</td>
<td>4</td>
<td>4-5</td>
</tr>
<tr>
<td>ROYAL BLUE #128-04</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>DARK NAVY #124-01</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Facilities

<table>
<thead>
<tr>
<th>Article</th>
<th>Light</th>
</tr>
</thead>
<tbody>
<tr>
<td>SONORA AS</td>
<td>3</td>
</tr>
<tr>
<td>GREY #128-32</td>
<td>4</td>
</tr>
<tr>
<td>BLACK #128-01</td>
<td>4</td>
</tr>
</tbody>
</table>

NOTES

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

- FLAME RETARDANT, ANTISTATIC

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

- Keep in cool dry place, with no direct sunlight.


- SONORA AS is a light flame retardant fabric for protective clothing in hot climate. It is made of 80% cotton, 19% polyester and 1% anti-static yarn with flame retardant finishing. Protective clothing made of Sonora AS is used in oil and gas industry (pipeline work), petrochemical (refinery staff), utilities (energy/water/gas service personnel), etc. High quality cotton rich blend of Sonora gives the wearer comfort of natural fibers and is improved by addition of polyester for higher tear. Sonora AS has a high quality Belltron® AS yarn embedded in its structure in stripes which gives the wearer protection against Electrostatic Discharge in dangerous and explosive environment at refineries and oil terminals.
87% COTTON, 12% NYLON, 1% ANTISTATIC YARN
260 GSM, SATIN 4/1

**FIRE RATING**

**ANTISTATIC, MULTI-RISK**

**COTTON/NYLON FABRIC | OIL & GAS**

Volcano is a flame retardant cotton-nylon blend being extremely tear resistant yet relatively light. Durability of this fabric sufficiently increases life cycle of flame retardant garment. Weighting 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 11611-1). 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.

**SPECIFICATION**

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOLCANO</td>
<td>87% Cotton, 12% Nylon, 1% Antistatic yarn</td>
<td>Carbon (Belltron)</td>
<td>260 gsm ±5%</td>
<td>150 cm</td>
<td>Flame Retardant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Warp</th>
<th>Weft</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 N</td>
<td>600 N</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>28 000 rubs</td>
<td>28 000 rubs</td>
<td>28 000 rubs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**COLOUR FASTNESS**

<table>
<thead>
<tr>
<th>LIGHT</th>
<th>MID</th>
<th>DARK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange, Red, Yellow</td>
<td>Grey</td>
<td>Dark Grey, Royal Blue</td>
</tr>
</tbody>
</table>

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. Weighting 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 11611-1). 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.
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 the integrated carbon antistatic yarn, Artex prevents building up electrostatic discharge (ESD) and eliminates the possibility of explosion in oil, gas and other industries.
FLAME RETARDANT FABRIC FOR FR-CLOTHING

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

META ARAMID FABRIC | FR-TURNOUT GEAR

Aravis FR-liner is designed for fire fighter’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 is thin and light (120 gsm). At the same time Aravis-120 maintains permeation 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.

ARAVIS-120
AVAILABLE COLOURS *

COLORS:
- MELANGE GREY

CARE INSTRUCTIONS:
- Keep in cool dry place, with no direct sunlight.

SPECIFICATION

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Moire</th>
<th>Usable width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARAVIS-120</td>
<td>50% Meta-Aramid, 50% FR-Viscose</td>
<td>Carbon (Belltron) 120 gsm ±5%</td>
<td>FR-Plain 1/1</td>
<td>150cm</td>
<td>Flame Retarding</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Warp</th>
<th>Tensile str.</th>
<th>ISO 13934-1</th>
<th>390 N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weft</td>
<td>Tearing str.</td>
<td>ISO 13937-2</td>
<td>25 N</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>MELANGE GREY</td>
<td>4-5</td>
<td>4-5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WARP: 390 N 25 N ≤ 3% 4-5
WEFT: 370 N 23 N ≤ 3%

AVAILABLE COLOURS:
- MELANGE GREY

COLOURFASTNESS:
- COLOUR CHANGE: ISO 105 C06
- STAIN ON POLYESTER: ISO 105 E04
- STAIN ON COTTON: ISO 105 E04
- WET RUBBING: ISO 105 X12
- DRY RUBBING: ISO 105 X12
- LIGHT: ISO 105 B02
**FR-JERSEY-200C**

60% MODACRYLIC, 38% COTTON, 2% ANTISTATIC

200 GSM

**NEW**

**FLAME RETARDANT, ANTISTATIC MODACRYLIC FABRIC | THERMAL CLOTHING**

Flame Retardant knitted fabric FR-Jersey has been developed in weight 200 gsm. It meets a wide list of norms of ISO 11612 and protects against electric discharge. FR-Jersey helps to increase fr protection when wears under FR clothing (FR-jacket and FR-pants) and works as a good heat insulator.

**SPECIFICATION**

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Weave</th>
<th>Usable width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR-JERSEY-200C</td>
<td>60% Modacrylic, 38% Cotton, 2% Antistatic</td>
<td>Carbon (Belltron)</td>
<td>200 gsm ±5%</td>
<td>Knitted fabric</td>
<td>150 cm</td>
<td>Flame Retardant</td>
</tr>
</tbody>
</table>

**COLOUR FASTNESS**

<table>
<thead>
<tr>
<th>COLOUR</th>
<th>LIGHT</th>
<th>MEDIUM</th>
<th>DARK</th>
<th>BLACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange, Red, Yellow</td>
<td>4/5</td>
<td>4/5</td>
<td>4/5</td>
<td>4/5</td>
</tr>
<tr>
<td>Green, Grey, Navy, Royal Blue, Black</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

**Bursting Resistance ISO 13938-1**

| FR-JERSEY-200C | 190 kPa ≤ 5% |

**Shrinkage ISO 5077 after 5 washes**

| FR-JERSEY-200C | ≤ 5% |

**COLOUR CHANGE ISO 105-C06**

| FR-JERSEY-200C | 4-5 | 4-5 | 4-5 | 4-5 |

**STAIN ON POLYESTER ISO 105-D06**

| FR-JERSEY-200C | 4 | 4 | 4 | 4 |

**STAIN ON COTTON ISO 105-D06**

| FR-JERSEY-200C | 4 | 4 | 4 | 4 |

**WET RUBBING ISO 105-X12**

| FR-JERSEY-200C | 3 | 3 | 2-3 | 2-3 |

**DRY RUBBING ISO 105-X12**

| FR-JERSEY-200C | 4 | 4 | 4 | 4 |

**LIGHT ISO 105-B02**

| FR-JERSEY-200C | 3 | 4 | 4 | 4 |

**NEW**

A1, A2, B1, C1, F1
FR-FLEECE-280

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

**FLAME RETARDANT, 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 whole fabric its flame resistance. FR-Fleece can be used as a middle layer or warmer for winter FR clothing.

### AVAILABLE COLOURS *

- BLACK #128-01
- GREEN #128-02
- DARK NAVY #124-01
- RED #130-06
- ROYAL BLUE #128-04
- FRAMING #128-07
- YELLOW 66-102 #128-08

### COLOUR FASTNESS

- **LIGHT**
  - Orange, Red, Yellow: 4.5
  - Green: 4.5
  - Blue, Purple: 4.5
  - Black: 4.5
- **MEID**
  - Orange, Red, Yellow: 4.5
  - Green: 4.5
  - Blue, Purple: 4.5
  - Black: 4.5

### CARE INSTRUCTIONS:

- Keep in cool dry place, with no direct sunlight.

### SPECIFICATION

- **FR-FLEECE-280**
  - 60% Modacrylic, 39% Cotton, 1% Antistatic Carbon
  - Carbon Weight: 280 gsm ±5%
  - Weave: Knitted
  - Usable width: 150 cm
  - Flame Retardant

- **Bursting Resistance**
  - ISO 13938-1
  - Warp: 232 kPa
  - Weft: 232 kPa

- **Shrinkage ISO 5077 after 5 washes**
  - Warp: ≤ 4%
  - Weft: ≤ 3%

- ** Abrasion Resist. ISO 12947-2**
  - 15 000 rubs
  - Method 2

- **Pilling Resist. ISO 12945-2**
  - 4
FR-OXFORD-250
98% POLYESTER, 2% ANTISTATIC YARN, 250 GSM, Plain 1/1

FLAME RETARDANT, ANTISTATIC, WATER & 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.

FR-OXFORD-250
AVAILABLE COLOURS:
- BLACK #128-01
- ORANGE #102 #125-07
- GREEN #128-03
- ORANGE HI-VIZ
- #128-07
- YELLOW HI-VIZ
- #128-06

CARE INSTRUCTIONS:
Keep in cool dry place, with no direct sunlight.

SPECIFICATION

<table>
<thead>
<tr>
<th>Article</th>
<th>Composition</th>
<th>Antistatic</th>
<th>Weight</th>
<th>Width</th>
<th>Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR-OXFORD 250</td>
<td>98% Polyester, 2% Antistatic yarn</td>
<td>Carbon (Belltron)</td>
<td>250 gsm ±5%</td>
<td>Plain 1/1</td>
<td>Flame Retardant PU (Polyurethane)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Weft</td>
<td>1800 N</td>
<td>60 N</td>
<td>≤ 3%</td>
<td>20 000 rubs 4-5</td>
<td>4-5</td>
<td>2-3</td>
<td>4-5</td>
<td>4-5</td>
<td>4-5</td>
</tr>
<tr>
<td>Warp</td>
<td>900 N</td>
<td>90 N</td>
<td>≤ 1%</td>
<td>20 000 rubs 4-5</td>
<td>6-5</td>
<td>2-3</td>
<td>4-5</td>
<td>4-5</td>
<td>4-5</td>
</tr>
</tbody>
</table>

COLOUR FASTNESS

<table>
<thead>
<tr>
<th>Article</th>
<th>Light</th>
<th>Medium</th>
<th>Dark</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange, Red, Yellow</td>
<td>4-5</td>
<td>4-5</td>
<td>4-5</td>
<td>4-5</td>
</tr>
<tr>
<td>Green, Grey</td>
<td>3-4</td>
<td>3-4</td>
<td>3-4</td>
<td>3-4</td>
</tr>
<tr>
<td>Navy, Dark Blue, Royal Blue</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

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