

FRISTADS®

FLAME PROTECTION



***MADE
TO MATCH
YOUR
AMBITIONS
LET'S GET
TO WORK***



YOUR SAFETY IS OUR TOP PRIORITY

- **HOW MUCH PROTECTION DO YOU NEED?** > 8
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- **FRISTADS' UNIQUE LAYER-ON LAYER ARC TEST** > 14
- **GET THE HIGHEST VISIBILITY** > 16
- **NEW! LIGHTWEIGHT GORE-TEX® SHELL GARMENTS** > 20



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LIGHTWEIGHT FLAMESTAT GORE-TEX®
Flexible GORE-TEX® Multinorm shell garments with high arc rating.



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FLAMESTAT GORE-TEX®
Multinorm all-weather protection with inherent flame protection.



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FLAMESTAT MULTINORM
High-performance Multinorm collection with inherent flame protection.



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WOMENS COLLECTION
Flamestat Multinorm garments with inherent flame protection.



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FLAMESTAT MOLTEN METAL
Inherent flame protection against molten aluminium and iron. Also for welders.



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FLAME
Flame retardant-treated collection with high cotton comfort.

We put the worker's safety first. By choosing our flame protection garments, you get the ultimate protection according to the latest European norms. To ensure Fristads quality, we also perform our own tests – comprising anything from strength, tensile and abrasion, to real life usability and user comfort. Our wide assortment makes it easy to find the flame protective workwear that fit your occupation and risk assessment while adding to your safety.



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FLAME WELDING

Flame retardant-treated collection with high cotton comfort for welders.



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FLAME FLAMTECH®

High visibility flame retardant-treated collection. Also for welders.



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FLAME RAINWEAR

High visibility flame-protected rainwear.



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FLAME ACCESSORIES

Additional flame-protected products.



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FLAMESTAT UNDERWEAR

Soft and comfortable underwear with inherent flame protection.



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USEFUL INFORMATION

Facts, norms and certifications.

YOUR PROTECTION, NO COMPROMISES

- Certified according to European norms and offer protection from second-degree burns
- Thoroughly tested materials with certified protection, high durability and comfort
- Complete range of inherently flame-protected materials – in all three layers
- Carefully designed fit for great comfort
- Function and design in close collaboration with users
- Flamestat garments are tested for electric arc layer-on-layer protection
- High-visibility garments are certified together so you can combine them to attain the highest class
- Most garments are leasing-laundry tested according to ISO 15797 and withstand 25-50 washes.
- Best quality reflective tapes meet high washing requirements and offer considerable durability
- Double-stitching seams on all reflective tapes give even better durability
- Women's collection with feminine fit
- Large range of sizes. Most garments are available from XS
- Flame-retardant CORDURA® reinforcements in our Flamestat collection
- Most garments are OEKO-TEX® certified

FRISTADS CORE ASSORTMENT EXTRA-LARGE STOCKS OF CHOSEN PRODUCTS

CORE

Based on experience and feedback from the people wearing our products, and with the aim of even further strengthening our offering, we have created the Fristads CORE assortment. A selection of the most well-used, appreciated and recommended styles throughout Europe.

We keep extra-large stocks of our CORE assortment to ensure products are available at all times. All products are marked with a CORE symbol in the brochure.
Read more at www.fristads.com

**"ALL OUR FLAME PROTECTED
GARMENTS HAVE A CLEAR
LABEL SHOWING THE
PROTECTIVE NORMS"**

NORMS AND CERTIFICATIONS

Certified Personal Protective Clothing Systems following the Directive 89/686/EEC for Personal Protective Equipment (PPE). Read more about certifications and norms on pages 56-61.



IEC 61482-2

Electric arc
Box test and
Open arc test



EN ISO 11612

Heat and flame



EN ISO 11611

Welding and allied processes



EN 1149

Electrostatic properties, design
requirements



EN 13034

Liquid chemicals, limited protection



EN ISO 14116

Heat and flame, limited
flame spread



EN ISO 20471

High visibility warning clothing



EN 343

Rain



EN 342

Cold

ISO 15797

Industrial washing

HOW MUCH PROTECTION DO YOU NEED?

RISK ASSESSMENT REVEALS THE POTENTIAL HAZARDS

Risk assessment at a workplace begins with an analysis of all the potential hazards. The findings from this study help determine suitable garments that offer the correct level of protection and the best comfort. We provide personal protective workwear solutions for almost all occupations, working conditions and – not least – for all your risk assessments. Examples of hazards that are investigated in a risk assessment:

Thermal hazards: High convective heat, high radiant heat, flame contact, steam, molten metals and hot surfaces.

Electric hazards: High voltage, electric arc, static charge build-up.

THE BEST CLOTHES ACCORDING TO YOUR NEEDS

In the workplace, there are often various protection needs of protection for different tasks. In our wide product range, we have certified protective clothing in various price categories, in made of several materials and with different features. We strive to find the right most comfortable solution with the right security level for your needs.

BE PROTECTED FROM TOP TO TOE

All the garments should be worn with other necessary safety equipment such as a safety helmet with protective visor, protective gloves and protective footwear (boots) to ensure the right level of protection. When underwear is used, it should be made of flame-retardant materials, never synthetic materials. See pages 12-13.



IEC 61482-2

ELECTRIC ARC

Protective clothing tested according to IEC 61482-2 protects against the thermal hazards that may occur in electric arc accidents. For more information see pages 56-57.

WHO NEEDS PROTECTION AGAINST ELECTRIC ARC?

Electricians, when servicing equipment in non-arc-safe distribution plants or electrical switchboards, or when working on high-voltage equipment.

PROTECTION AGAINST:

- Electric arc
- Metal splashes
- Heat and flame
- Radiant heat
- Convective heat
- High voltage
- Plasma clouds
- Radiation
- Steam

WE RECOMMEND:

- Flamestat lightweight GORE-TEX® garments see page 23
- Flamestat GORE-TEX® garments see page 24
- Flamestat Multinorm see pages 26-39
- Flame FlamTech® collection see pages 46-49
- Flamestat underwear see pages 52-55



EN ISO 11612

HEAT AND FLAME

Protective clothing that complies with EN ISO 11612 protects the user from contact with heat and flames. For more information see page 58.

WHO NEEDS PROTECTION AGAINST HEAT AND FLAME?

Electricians, industrial workers, miners, road- and rail-workers, welders. Workers in foundry operations (iron, steel, aluminium), off-shore, energy, refinery and maintenance.

PROTECTION AGAINST:

Limited flame spread (A)
Convective heat (B)
Radiant heat (C)
Molten aluminum splash (D)
Molten iron splash (E)
Contact heat (F)

WE RECOMMEND:

All our collections are certified to protect against heat and flame. For protection against molten iron and aluminium, see separate information on page 40.



EN ISO 11611

WELDING

Protective clothing for use in welding and allied processes is certified according to EN ISO 11611. For more information see pages 58 and 61.

WHO NEEDS WELDING PROTECTION?

Welders, rail-workers, miners, foundry workers.

PROTECTION AGAINST:

Welding sparks
UV radiation
Heat and flame

WE RECOMMEND:

Flamestat lightweight GORE-TEX® garments see page 23
Flame welding collection see page 44-45
Flame Flamtech® collection see pages 46-49
Flamestat shirt 7200 ATSS see page 34
Flamestat trousers 2148 AHS see page 31
Flamestat jacket 4966 MFAT see page 40
Flamestat trousers 2155 MFAT see page 40

SEE ALL OUR PRODUCTS AT WWW.FRISTADS.COM



EN 1149-5

ELECTROSTATIC DISCHARGE ATEX ENVIRONMENT

Approved and certified garments that protect against electrostatic discharge according to EN 1149-5. For more information see page 58.

WHO NEEDS PROTECTION IN EXPLOSIVE RISK ENVIRONMENTS?

Workers in the petro-chemistry, energy, refinery, maintenance and off-shore sectors.

PROTECTION AGAINST:

Static electricity, which can cause sparks.

WE RECOMMEND:

Flamestat lightweight GORE-TEX® garments see page 23
 Flamestat GORE-TEX® garments see page 24
 Flamestat Multinorm see pages 26-39
 Flame long sleeve polo shirt 784 PFLA see page 43
 Flame sweatshirt 984 SFLA see page 43
 Flame FlamTech® collection see pages 46-49
 Flame rainwear see page 50
 Flamestat underwear see pages 52-55



EN ISO 11612

MOLTEN IRON AND ALUMINIUM

Protective clothing designed to resist splashes of molten metal is certified against EN ISO 11612 (heat and flame) in the D3 and E3 categories. For more information see page 58.

WHO NEEDS PROTECTION AGAINST MOLTEN METAL SPLASHES?

Foundry workers, metal workers, welders.

PROTECTION AGAINST:

Heat and flame
 Molten aluminium splash (D3)
 Molten iron splash (E3)

WE RECOMMEND:

Flamestat jacket 4966 MFAT see page 40
 Flamestat trousers 2155 MFAT see page 40



EN ISO 20471

HIGH VISIBILITY

EN ISO 20471 is a standard for high-visibility garments – garments with enhanced visibility. For more information see page 59.

WHO NEEDS TO BE HIGHLY VISIBLE?

All workers who gain a higher level of protection by being extra-visible. Commonly in working situations involving vehicles, roads, railroads, large building sites or when working during night-time conditions or in bad weather.

PROTECTION AGAINST:

Accidents in areas often involving vehicles e.g. roads and railroads.

WE RECOMMEND:

Flamestat lightweight GORE-TEX® garments see page 23
 Flamestat GORE-TEX® garments see page 24
 Flamestat Multinorm high visibility garments see pages 26-39
 Flame FlamTech® collection see pages 46-49
 Flame rainwear see page 50



EN 13034

LIQUID CHEMICALS

Protective clothing tested according to EN 13034 offers protection against liquid chemical splashes. For more information see page 58.

WHO NEEDS PROTECTION AGAINST CHEMICAL SPLASHES?

Industrial workers, miners. Workers in the petro-chemistry, energy, refinery, maintenance and off-shore sectors.

PROTECTION AGAINST:

Chemical splashes

WE RECOMMEND:

Flamestat lightweight GORE-TEX® garments see page 23
 Flamestat GORE-TEX® garments see page 24
 Flamestat Multinorm garments in quality ATHS and ATP see pages 26-39

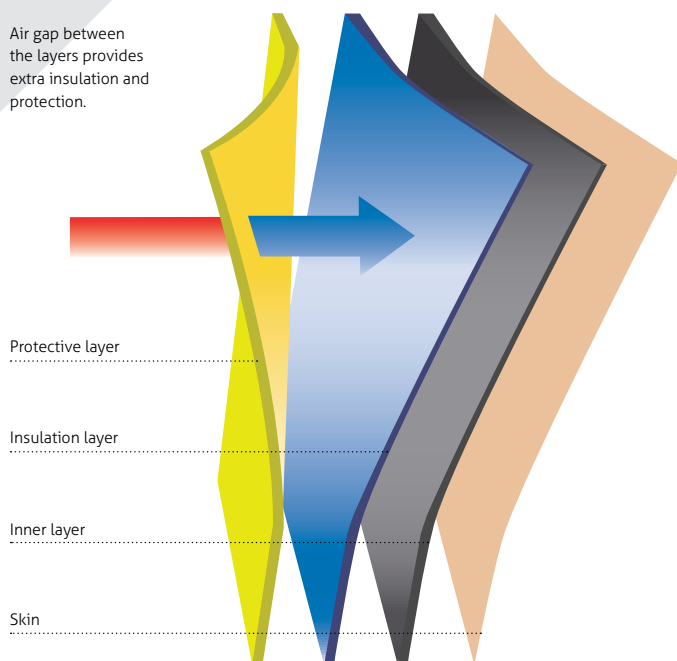
BETTER COMFORT AND HIGHER PROTECTION WITH FRISTADS THREE- LAYER SYSTEM

Flame retardancy prevents flames from spreading. However, heat can spread through the garment, causing the skin to burn. If you wear flame-retardant garments, they will protect against heat for a certain period. The period of time during which you are protected is increased if you also wear flame-retardant underwear and an insulation layer.

The three-layer system with flame protection from inside and out adds to your protection and comfort in all seasons. Dressing in multiple layers is the best way to keep warm and dry at the same time as it significantly boosts your protection.

- Cover your body from top to toe
- Wear multiple layers of garments
- Wear your garments buttoned
- Use other necessary safety equipment – helmet, gloves, footwear
- Always use underwear of flame-retardant materials, never synthetic materials
- Make sure your garments are not damaged

Air gap between the layers provides extra insulation and protection.



Flame retardant beanie, balaclava and collar see pages 51 and 53



THE BEST WAY TO PROTECT YOURSELF IS TO HAVE MULTIPLE LAYERS OF GARMENTS

**LAYER 1** – Inner layer

Flame retardant underwear adds to your protection. It transports body moisture away, keeps you dry and prevents chilling of the skin.

LAYER 2 – Insulation layer

An additional, flame-retardant, insulation layer provides heat insulation and additional protection. Select garment thickness based on your working conditions.

LAYER 3 – Protective layer

The outer layer is the protective shield that secures your safety.



FRISTADS TAKES ELECTRIC ARC PROTECTION ONE STEP FURTHER

We performed the electric arc tests with a large number of garment combinations to ensure the correct arc rating.

Wearing several layers of garments will increase the amount of energy that the garment system can withstand. Fristads is now market-leading in electric arc certifications, giving exact arc rating values for specific garment combinations. This also includes Box text class 2 on specific garment combinations. To assure correct arc rating values, a test of specific garments must be performed and it is not possible to calculate a value by just adding values to each other.

**TESTED LAYER
ON LAYER
COMBINATION**

67,3 cal/cm²

LAYER 3



**SEE OUR FILM ABOUT THE LAYER-ON-LAYER
ELECTRIC ARC TEST AT WWW.FRISTADS.COM**

MAXIMISE YOUR ELECTRIC ARC PROTECTION

We provide the unique facts you need to know how safe our garments are.

See all tested garment combinations at page 57.



Open arc result

EN 61482-1-1

ATPV 67,3 cal/cm²

HAF 95,4%

Box test approved: ☒

EN 61482-1-2 CLASS 2



ELECTRIC ARC CERTIFIED COMBINATION

Read more and see the exact values for different garment combinations on pages 57.



**FLAMESTAT LONG SLEEVE
T-SHIRT 7026 MOF**
Art no 121639

+



**FLAMESTAT HIGH VIS SHIRT
CL 3 7050 ATS**
Art no 124178

+



**FLAMESTAT HIGH VIS WINTER
PARKA CL 3 4086 ATHR**
Art no 109423

=



Open arc result

EN 61482-1-1

ATPV 67,3cal/cm²

HAF 95,4%

Box test approved: ☒

EN 61482-1-2 CLASS 2

**THE THREE GARMENTS ARE
ARC-TESTED TOGETHER TO
GET THE EXACT VALUE**

GET THE HIGHEST VISIBILITY BY COMBINING OUR GARMENTS

In most work zones there is a need for high visibility in addition to heat and flame protection. Commonly in working situations involving vehicles, roads, railroads, large building sites or when working during nighttime conditions or bad weather. All high visibility garments are certified according to EN ISO 20471 and are divided into three different classes – 1, 2 and 3 – depending on how visible they are. Class 3 is the highest level of visibility. Garments in class 1 or 2 can be combined to obtain class 3. All approved combinations are specified in the CE-label in our garments and a complete list is available on page 59.

FRISTADS HIGH VISIBILITY CLOTHING SYSTEM

CLASS 1
EN ISO 20471
FLAMESTAT HIGH VIS SHIRT CL 1
7051 ATS 124309

+

CLASS 2
EN ISO 20471
FLAMESTAT HIGH VIS CRAFTSMAN
TROUSERS CL 2 2075 ATHS 109420

=



CLASS 3
HIGH VISIBILITY EN ISO 20471



WELL-DRESSED AT WORK – MATCH WITH FRISTADS' OTHER COLLECTIONS

All our flame-retardant collections match colour-wise. If your company needs additional workwear without flame retardant capabilities, we can offer a broad range. Our high-visibility range matches our flame-retardant collections and we have several garments for building and construction applications in the same colour combinations.



Electrician



Craftsman



Caretaker



FRISTADS FLAME RETARDANT COLLECTIONS

CHOOSE INHERENT OR FLAME RETARDANT TREATED

To protect your skin, all our flame-retardant garments feature textile technology that inhibit the combustion process and create a protective barrier between the heat source/the flame and the skin to prevent second-degree burns in the event of an accident. Our range of flame-protected garments is divided in two categories – Flamestat and Flame. Flamestat stands for garments made of inherently flame retardant fabrics and Flame represents garments made of flame retardant treated fabrics.

FLAMESTAT INHERENT FLAME RETARDANT FABRICS

The flame protection in our Flamestat collection fabrics is already integrated in the fibres. No flame retardant treatment is necessary since the flame protection is inherent and applies throughout the garment's lifetime.

FLAME FLAME RETARDANT TREATED FABRICS

The fabrics in our Flame and Flamtech® collections are flame retardant-treated. The treatment forms a net surrounding the fabric fibres and provides durable protection.

FLAME

FLAME RETARDANT TREATED FABRICS



FLAME FLAMTECH®

- High visibility garments
- Approved for welding
- See pages 46-49

FLAME HIGH VIS JACKET CL 3 4846 FBPA 101050> Page 46
FLAME HIGH VIS TROUSERS CL 2 2042 FBPA 101046> Page 46



FLAME

- High cotton comfort
- Comfortable and durable
- See pages 41-43

FLAME JACKET 4030 FLAM 100333> Page 42
FLAME CRAFTSMAN TROUSERS 2030 FLAM 100329> Page 42



FLAME WELDING

- Approved for welding
- High cotton comfort
- See pages 44-45

FLAME WELDING JACKET 4031 FLAM 100334> Page 44
FLAME WELDING TROUSERS 2031 FLAM 100330> Page 44

FLAMESTAT

INHERENT FLAME RETARDANT FABRICS



FLAMESTAT UNDERWEAR

- Soft comfortable materials
- Electric arc tested
- Antistatic
- See pages 52-55

FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF

121639> Page 53

FLAMESTAT LONG JOHNS 7027 MOF

121641> Page 53

FLAMESTAT SOCKS 980 SFA 100580> Page 51

FLAMESTAT MULTINORM

- Multinorm
- Wide collection
- from T-shirts to winter jackets
- Also women's models
- See pages 26-39

FLAMESTAT HIGH VIS JACKET WOMAN CL 3 4275 ATHS

122195> Page 32

FLAMESTAT HIGH VIS CRAFTSMAN TROUSERS

WOMAN CL 2 2775 ATHS 122196> Page 32

FLAMESTAT MOLTEN METAL

- Protection against molten metal
- Approved for welding
- See page 40

FLAMESTAT JACKET 4966 MFAT 111632> Page 40

FLAMESTAT TROUSERS 2155 MFAT 111635> Page 40

FLAMESTAT LIGHT-WEIGHT GORE-TEX® GARMENTS

- Lightweight and flexible
- Multinorm
- Extra high arc rating
- Waterproof, windproof, breathable
- See pages 20-23

FLAMESTAT HIGH VIS GORE-TEX® JACKET CL 3 4095 GXE

125617> Page 23

FLAMESTAT HIGH VIS GORE-TEX® TROUSERS CL 2 2095 GXE

125618> Page 23

NEW! THE LIGHTEST GORE-TEX® FLAME- PROTECTION GARMENTS EVER



Heavy rain in the morning. Rising temperatures in the afternoon. Long working days. It's tough to work outside in hard weather conditions. Fristads' new shell garments are the lightest GORE-TEX® arc and flame protective garments on the market. They stay durably waterproof and reliably protect you against thermal and electric hazards. Maximum comfort and flexibility combined with the highest protection level.

LIGHTWEIGHT
FLEXIBLE
MULTINORM
HIGH ARC RATING
WATERPROOF
WINDPROOF
BREATHABLE



Electric arc
49,1 cal/cm²
7 kA



Heat and
flame



Electrostatic
discharge



Heavy
welding
class 2



Molten
metal



Liquid
chemicals



High
visibility



Rain





NEW ULTIMATE GORE-TEX® SHELL GARMENTS WITH OUTSTANDING PROTECTION AND COMFORT

- Lightweight and flexible
- Extra high electric arc protection
Open arc: 49,1 cal/cm²
Box test: class 2 = 7kA
- Electrostatic discharge protection
- Approved for heavy welding class 2
- Molten metal protection
- Liquid chemicals protection
- High visibility certified
- Certified rain garments
- Metal free
- Waterproof
- Windproof
- Breathable
- Inherent flame protection
- Dirt and oil repellent
- Approved for 30 washes at 60°

FABRIC GXE / GORE-TEX® MATERIAL

GXE is the new lightweight and flexible GORE-TEX® 2-layer material providing greater freedom of movement for the wearer. It is waterproof and windproof as well as breathable, and the fabric remains light and flexible even in wet conditions.

The GXE fabric is made of polyester and antistatic fibres with a flame-retardant and electric arc-protective laminate. The material has inherent flame protection in the sense that the flame-protective performance is included in the laminate. No flame retardant treatment of the outer textile is added. The fabric's protective performance is exactly the same on the first day of usage as it would be after years of using and washing the garment.

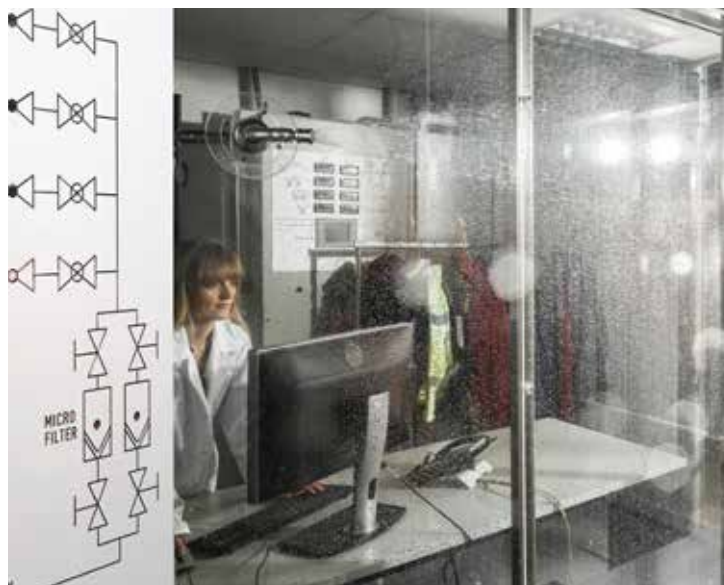
The high-visibility GXE fabric provides outstanding Multinorm protection and is certified for a wide range of hazards. The garments are electric arc-tested for both Box test and Open Arc, with very high ratings. The heat and flame protection also includes molten metal splash resistance. In addition, the fabric is approved for heavy welding class 2, has electrostatic properties and protects against liquid chemicals. Approved for 30 washes at 60°.

WEIGHT: 220 g/m²

CLASS 2: 7kA

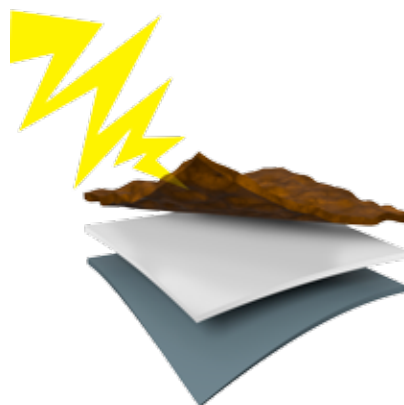
EBT: 49,1 cal/cm²

HAF: 94,8%

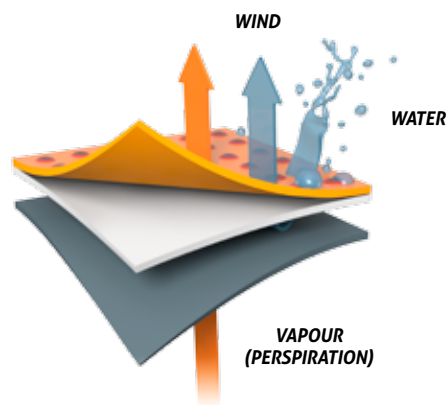


TESTED IN RAIN ROOM

Gore Rain Tower prototype testing. This sophisticated testing facility is designed to simulate demanding, life-like rain conditions. Garment constructions and styles are tested for one hour in heavy rain to ensure waterproofness.



The GXE fabric technology blocks convective heat flow during arc exposure and stops propagation.



The material and garment construction are durably waterproof, windproof and highly breathable.



Detachable and adjustable hood

Chest pockets with zips,
one with D-ring

Two inside pockets

Front pockets
with zips

Adjustable sleeve
ends with elastic
inner cuffs

Two back pockets
with flaps

Leg pocket

Leg pocket and
phone pocket

CORDURA® reinforced
knee pockets

Concealed zips
up to knees

Adjustable leg
ends with inside
snow gaiter



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NEW
AUTUMN 2017



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FLAMESTAT HIGH VIS GORE-TEX® JACKET CL 3 4095 GXE

Article no 125617

2-layer GORE-TEX®, wind and waterproof but breathable / Dirt and oil repellent / Fully lined / Reflective detail on shoulders / Detachable lined hood with adjustable strap and drawstring / Storm flap with zip to top of collar and velcro fastening / 2 chest pockets with flap with velcro fastening and zip, 1 with D-ring / 2 front pockets with flap with velcro fastening and zip / 2 inside pockets, 1 with button and 1 with zip / Adjustable sleeve end / Elastic inner cuffs / Adjustable hem with drawstring / Zip in lining to make transfer easier / Metal free garment / Waterpillar > 10.000 mm / eTFPE membrane / Breathability RET 8,33 / Approved according to EN 61482-1-2 class 2, EN 61482-1-1 EBT 49,1 cal/cm² HAF:94,8%, EN ISO 11612 A1 A2 B2 C1 D3 E1 F1, EN ISO 11611 A1 A2 class 2, EN 1149-5, EN 13034 type PB [6], EN ISO 20471 class 2 – size XS and class 3 – sizes S-3XL, EN 343 class 3/3.

MATERIAL 99,4% polyester, 0,6% carbon, 2-layer GORE-TEX®, wind and waterproof but breathable. Lining: 50% meta-aramide, 50% viscose FR.

WEIGHT 220 g/m², lining 130 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



NEW
AUTUMN 2017

ELASTIC
DETACHABLE
BRACES



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FLAMESTAT HIGH VIS GORE-TEX® TROUSERS CL 2 2095 GXE

Article no 125618

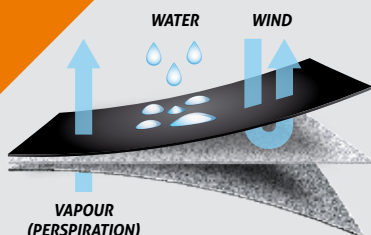
2-layer GORE-TEX® material, wind and waterproof but breathable / Dirt and oil repellent / Fully lined / Elastic detachable braces / 2 front pockets with flap and zip / 2 back pockets with flap and concealed snap fastening / Hammer loop / 2 leg pocket with flap and concealed snap fastening, 1 with phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening / Height adjustment for knee pad in knee pocket / Concealed zip up to knee / Snow gaiter / Adjustable leg end / Metal free garment / Waterpillar > 10.000 mm / eTFPE membrane / Breathability RET 8,33 / Approved according to EN 61482-1-2 class 2, EN 61482-1-1 EBT 49,1 cal/cm² HAF:94,8%, EN ISO 11612 A1 A2 B2 C1 D3 E1 F1, EN ISO 11611 A1 A2 class 2, EN 1149-5, EN 13034 type PB [6], EN ISO 20471 class 2 and EN 343 class 3/3

MATERIAL 99,4% polyester, 0,6% carbon, 2-layer GORE-TEX®, wind and waterproof but breathable. Lining: 50% meta-aramide, 50% viscose FR. **WEIGHT** 220 g/m², lining 130 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



COMPLETE PROTECTION WITH GREAT COMFORT IN ALL WEATHERS



THE GORE-TEX® MEMBRANE (ePTFE) has more than 1.4 billion pores per square centimetre. The membrane is completely waterproof from the outside, while allowing perspiration to evaporate from the inside.

FABRIC GXH / GORE-TEX® MATERIAL

GHX is a GORE-TEX® material in two layers, and it is wind and waterproof as well as breathable. Our GXH fabric has inherent flame retardant fibres and it is made from modacrylic, cotton, polyester and anti-static GORE-TEX® membrane (ePTFE). The surface is dirt and oil-repellent. The GXH fabric can withstand a pressure equivalent to a 28,000mm waterpillar in GORE's own tests. The properties of the ePTFE GORE-TEX® membrane remain after at least 35 washes in industrial laundry and the clothing retains all its original functions.

WEIGHT: 275 g/m²

LOI: 35%

ATPV: 29,6 cal/cm²

HAF: 92,2%

CLASS 2: 7kA

- Waterproof, windproof, breathable
- Inherent flame protection
- Electric arc protection
- Electrostatic discharge protection
- Liquid chemicals protection
- High visibility certified
- Certified rain garments
- Dirt and oil repellent
- Approved for 35 washes at 60°



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FLAMESTAT GORE-TEX® JACKET CL 3 4089 GXH

Article no 100379

2-layer GORE-TEX®, wind and waterproof but breathable / Dirt oil and water-repellent / Reflective detail on shoulders / Fully lined / Storm flap with zip to top of collar and concealed snap fastening / Detachable lined hood with adjustable strap and drawstring / Adjustable sleeves / Drawstring at bottom / 2 chest pockets with concealed zip / 2 front pockets with zip under reflective tape / Inside pocket with zip / Mobile phone pocket with zip and map pocket with zip including mobile phone pocket both with earpiece slot and loop reachable from outside / Zip in lining to make embroidery and transfer easier / Waterpillar > 10.000mm / ePTFE membrane / Breathability RET < 7 / Approved according to EN 61482-1-2 class 2, EN 61482-1-1 main fabric ATPV:29,6 cal/cm² HAF:92,2%, EN ISO 11612 A1 B2 C2, EN 1149-5, EN 13034 type PB [6], EN ISO 20471 class 3 and EN 343 class 3/3.

MATERIAL Outer material of 52% modacrylic, 42% cotton 6% polyester 2-layers anti-static GORE-TEX®- laminate wind and waterproof but breathable. Taped seams. Lining: 50% Nomex® Aramid 50% Viscose FR. **WEIGHT** Outer fabric 275 g/m², lining 120 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



FLAMESTAT HIGH VIS GORE-TEX® TROUSERS CL 2 2089 GXH

Article no 110706

2-layer GORE-TEX®, wind and waterproof but breathable / Dirt, oil and water repellent / Fully lined / Elastic detachable braces / Front pockets with velcro fastening / CORDURA® reinforced back pockets with flap and concealed snap fastening / Double reinforced crotch seam / 2 Leg pocket with flap and concealed snap fastening, one with phone pocket with flap and velcro fastener, D-ring and plastic ID-card holder and one with button and loop for sheath knife / Hammer loop / CORDURA® reinforced thigh panels in contrast colour / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA®-reinforced leg ends / Concealed zip up to knees / Snow gaiters / Adjustable leg ends / Waterpillar > 10.000 mm / ePTFE membrane / Breathability RET < 7 / Approved according to EN 61482-1-2 class 2, EN 61482-1-1 main fabric ATPV:29,6 cal/cm² HAF: 92,2%, EN ISO 11612 A1 B2 C2, EN 1149-5, EN 13034 Type PB [6], EN ISO 20471 class 2 and EN 343 class 3/3.

MATERIAL Outer material of 52% modacrylic, 42% cotton 6% polyester, 2 layers anti-static GORE-TEX® laminate, wind and waterproof, breathable. Taped seams. Reinforcement in 79% cotton FR, 20% polyamide, 1% antistatic fibre. Lining: 50% Nomex® Aramid 50% Viscose FR. **WEIGHT** Outer fabric 275 g/m², lining 120 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.





FRISTADS FLAMESTAT MULTINORM

SUPERIOR PROTECTION, FUNCTION, COMFORT AND DURABILITY

Our high-performance Flamestat Multinorm collection is certified according to several European norms to protect workers in many different professions and to meet most risk assessments. All Flamestat garments have inherent flame protection, which means that the material fibres are inherent and offer permanent flame protection.

- Inherent flame protection
- Electric arc protection tested to both Box test and Open arc test
- Tested for electric arc layer-on-layer protection
- Heat and flame protection
- Antistatic – electrostatic discharge protection
- Chemical splash protection
- Most products are certified high visibility garments
- Metal free
- Flame retardant and antistatic CORDURA® reinforcements
- Large range of garments for all weathers
- Great comfort and freedom of movement
- Large size range
- Womens' collection
- All garments in AHP and AHS quality is dirt, oil and water-repellent.
- Approved for 50 washes at 60°. High vis garments approved for 25 washes at 60°.
- Most garments approved for industrial washing according to ISO 15797
- Most of the garments are OEKO-TEX® certified



ELECTRIC ARC CERTIFIED COMBINATION

Read more and see the exact values for different garment combinations on pages 14-15, 57.



**FLAMESTAT LONG SLEEVE
T-SHIRT 7026 MOF** 121639

+



**FLAMESTAT LONG SLEEVE T-SHIRT
CL 1 7072 TFLH** 111842

+



**FLAMESTAT JACKET
4174 AHS** 119921

=



Open arc result

EN 61482-1-1

ATPV 41,2 cal/cm²

HAF 94,1%

Box test approved: ☒

EN 61482-1-2 CLASS 2

**THE THREE GARMENTS ARE
ARC-TESTED TOGETHER TO
GET THE EXACT VALUE**

FLAMESTAT ATHS



Roomy chest pocket with inside D-ring, pen strap and concealed snap fastening

Inside phone pocket with velcro fastening and loop for mobile phone earpiece

2 front pockets with concealed snap fastening

Adjustable cuffs and waist

Tuckable, CORDURA® reinforced, loose-hanging front pocket with 3 pockets and tool loops

Reinforced crotch seam

CORDURA® reinforced folding rule pocket with tool pocket, button and loop for sheath knife

CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads

Front placket opening with zip to top of collar and concealed snap fastening

Roomy chest pocket with opening for radio-antenna at top and pocket with vertical zip

Inside pocket with button

Extended back

Tuckable, CORDURA® reinforced, loose-hanging front pocket with extra pocket

Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder

Reinforced thigh panels

Pre-shaped knees

Double stitching seams on all reflective tapes give better durability

CORDURA® reinforced leg ends



ATHS FABRIC

The ATHS fabric has inherently flame retardant fibres protection and is made from modacrylic, cotton, polyamide and anti-static fibres. The fabric's surface is dirt, oil and water repellent and the reverse side has a soft surface, providing a comfortable feeling next to the body. The ATHS fabric is a lightweight material which makes the garments comfortable to wear and allows for better freedom of movement. The fabric contains polyamide for stronger resistance to wear and tear. This fabric provides excellent heat insulation and prevents second-degree burns, it is quick drying and has excellent moisture management properties. The fabric and the reflective tapes withstand all our high requirements. We recommend industrial washing at 60° for our ATHS garments. Leasing laundry-tested according to ISO 15797 for 50 washes. High vis colours are approved for 25 washes.

WEIGHT: 300 g/m² **LOI:** 35%
EBT: 10.5 cal/cm² **HAF:** 81.4%

CORE

SEE PAGE 6



540



IEC 61482 EN 11612 EN 1149 EN 13034

FLAMESTAT JACKET 4174 ATHS

Article no 119921

Dirt, oil and water repellent / Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / 1 chest pocket with bellowed pocket bag, inside D-ring, pen strap and concealed snap fastening / 1 chest pocket with zip fastening / 2 front pockets with concealed snap fastening / Inside pockets with button / Inside mobile phone pocket with velcro fastening and loop for mobile phone earpiece / Adjustable waist and cuffs / Reflective tape around sleeves / Extended back / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10.5 cal/cm² HAF: 81.4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5 and EN 13034 Type PB [6] / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre.
WEIGHT 300 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



CORE

SEE PAGE 6



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IEC 61482 EN 11612 EN 1149 EN 13034 EN 20471

FLAMESTAT HIGH VIS TROUSERS CL 1 2176 ATHS

Article no 121355

Dirt, oil and water-repellent / 2 front pockets / D-ring at waistband / 2 reinforced back pockets with flaps / Leg pocket with flap and concealed snap fastening, mobile phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Hammer loop / Reinforced folding rule pocket with tool pocket, button and loop for sheath knife / Pre-shaped knees / Reinforced knee pockets with inside opening for height-adjustable knee pads / Reinforced leg ends / Metalfree garment / Detachable id-card holder contains metal / 2-needle stitching on reflective tape / Adjustable leg length with 5 cm hem allowance / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10.5 cal/cm² HAF: 81.4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 cl 1 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. Reinforcement: 54% modacrylic, 44% cotton, 2% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** C44-C62, D84-D116.



CORE

SEE PAGE 6



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IEC 61482 EN 11612 EN 1149 EN 13034 EN 20471

FLAMESTAT HIGH VIS CRAFTSMAN TROUSERS CL 1 2074 ATHS

Article no 109417

Dirt, oil and water-repellent / 2 tuckable, CORDURA® reinforced, loose-hanging front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 front pockets / D-ring at waistband / 2 CORDURA®-reinforced back pockets one with flap / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Hammer loop / CORDURA® reinforced folding rule pocket with tool pocket, button and loop for sheath knife / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA® reinforced leg ends / Metalfree garment / Detachable id-card holder contains metal / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10.5 cal/cm² HAF: 81.4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 cl 1 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% Polyamide, 2% anti-static fibre. Reinforcement: 79% cotton FR, 20% polyamide, 1% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** C44-C62, C146-C156, D84-D116.





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FLAMESTAT HIGH VIS JACKET CL 3 4175 ATHS

Article no 119922

Dirt, oil and water repellent / Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / 1 chest pocket with bellowed pocket bag, inside D-ring, pen strap and concealed snap fastening / 1 chest pocket with zip fastening / 2 front pockets with concealed snap fastening / Inside pockets with button / Inside mobile phone pocket with velcro fastening and loop for mobile phone earpiece / Adjustable waist and cuffs / Reflective tape around sleeves / Extended back / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 class 2 – sizes XS and class 3 – S - 3XL / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% antistatic fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



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FLAMESTAT HIGH VIS JACKET CL 2 4176 ATHS

Article no 120929

Dirt, oil and water repellent / Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / 2 bellowed chest pockets with flap and concealed snap fastening, 1 with inside D-ring and pen strap and 1 with opening for radio-antenna at top / 1 chest pocket with zip / 2 front pockets with concealed snap fastening / Inside pockets with button / Inside phone pocket with velcro fastening and loop for mobile phone earpiece / Adjustable waist and cuffs / Reflective tape around sleeves / Extended back / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 class 1 sizes XS-S, class 2 sizes M-3XL / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% antistatic fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



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FLAMESTAT HIGH VIS CRAFTSMAN TROUSERS CL 2 2075 ATHS

Article no 109420

Dirt, oil and water-repellent / 2 tuckable, CORDURA® reinforced, loose-hanging front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 front pockets / D-ring at waistband / Double reinforced crotch seam / 2 CORDURA®-reinforced back pockets one with flap / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Hammer loop / CORDURA® reinforced folding rule pocket with tool pocket, button and loop for sheath knife / Reinforced thigh panels in contrast colour / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA® reinforced leg ends / Metal-free garment / Detachable id-card holder contains metal / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 cl 2 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. Reinforcement: 79% cotton FR, 20% polyamide, 1% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** C44-C62, C146-C156, D84-D116.



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FLAMESTAT HIGH VIS BIB 'N' BRACE CL 2 1075 ATHS

Article no 109419

Dirt, oil and water-repellent / Front placket opening with two-way, full-length front zip and concealed snap fastening / 2 chest pockets with concealed snap fastening / Elasticated braces / 2 tuckable, CORDURA®-reinforced, loose-hanging pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / D-ring at waist / Double reinforced crotch seam / 2 CORDURA®-reinforced back pockets one with flap / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Hammer loop / CORDURA®-reinforced folding rule pocket with tool pocket, button and loop for sheath knife / Reinforced thigh panels in contrast colour / Pre-shaped knees / CORDURA®-reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA®-reinforced leg ends / Metal-free garment / Detachable id-card holder contains metal / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 class 2 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. Reinforcement in 79% cotton FR, 20% polyamide, 1% antistatic fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** C44-C62.





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FLAMESTAT HIGH VIS WAISTCOAT CL 2 5075 ATHS

Article no 110642

Reflective detailing on shoulders / Front placket opening with zip and concealed snap fastening / 2 loose-hanging chest pockets with snap fastening, one with flap and D-ring with concealed snap fastening / 2 front pockets / 2 CORDURA® reinforced loose-hanging, tuckable front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 CORDURA® reinforced loose-hanging back pockets, both with extra tool pocket / 2 hammer loops / Metalfree garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4%, EN ISO 11612 A1 B1 C1 F1, EN 1149-5 all certifications together with Shirt 109425, EN ISO 20471 class 2 and fabric approved according to EN 13034 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. Reinforcement in 79% cotton FR, 20% polyamide, 1% antistatic fibre. **WEIGHT** 300 g/m². **COLOUR** 130 Hi-Vis Yellow. **SIZE** XS-2XL.



540



FLAMESTAT COAT 3074 ATHS

Article no 121115

Dirt, oil and water repellent / Reflective detailing on shoulders / Front placket opening with concealed snap fastening / 1 chest pocket with penpocket, flap with concealed snap fastening and outside pen straps / 2 front pockets with concealed snap fastening and flap / Cuffs with concealed snap fastening / Reflective tape around body / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4%, EN ISO 11612 A1 B1 C1 F1, EN 1149-5 and EN 13034 Type PB [6] / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



CORE

SEE PAGE 6



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FLAMESTAT TROUSERS 2148 ATHS

Article no 125038

2 front pockets / D-ring at waistband / 2 back pockets with flap and velcro fastening / Leg pocket with flap and snap fastening / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring / Adjustable leg length with 5 cm hem allowance / Metalfree garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN ISO 11611 A1 class 1, EN 1149-5 and EN 13034 Type PB [6] / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 540 Dark Navy. **SIZE** C44-C62, D84-D116.



CORE

SEE PAGE 6



540



FLAMESTAT TROUSERS 2144 ATHS

Article no 121354

Dirt, oil and water-repellent / 2 front pockets / D-ring at waistband / Double reinforced crotch seam / 2 back pockets with flap / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Leg pocket with flap / Ruler pocket / Pre-shaped knees / Reinforced knee pockets with inside opening for height-adjustable knee pads / Metalfree garment / Detachable id-card holder contains metal / Adjustable leg length with 5 cm hem allowance / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5 and EN 13034 Type PB [6] / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. Reinforcement: 54% modacrylic, 44% cotton, 2% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 540 Dark Navy. **SIZE** C44-C62, D84-D116.



WOMAN

UNDERWEAR
SEE PAGE 52



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FLAMESTAT HIGH VIS JACKET WOMAN CL 3 4275 ATHS

Article no 122195

Dirt, oil and water-repellent / Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / 1 chest pocket with bellowed pocket bag, inside D-ring, pen strap and concealed snap fastening / 1 chest pocket with zip fastening / 2 front pockets with concealed snap fastening / Inside pockets with button / Inside mobile phone pocket with velcro fastening and loop for mobile phone earpiece / Adjustable waist and cuffs / Reflective tape around sleeves / Extended back / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 class 2 – sizes XS - M and class 3 – L - 3XL / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% antistatic fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL



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FLAMESTAT HIGH VIS TROUSERS WOMAN CL 1 2776 ATHS

Article no 122197

Dirt, oil and water-repellent / 2 front pockets / D-ring at waistband / 2 CORDURA® reinforced back pockets with flaps / Leg pocket with flap and concealed snap fastening, mobile phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Hammer loop / CORDURA® reinforced folding rule pocket with tool pocket, button and loop for sheath knife / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA® reinforced leg ends / Metalfree garment / Detachable ID-card holder contains metal / 2-needle stitching on reflective tape / Adjustable leg length with 5 cm hem allowance / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 cl 1 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. Reinforcement: 79% cotton FR, 20% polyamide, 1% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** C34-C50.



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FLAMESTAT HIGH VIS CRAFTSMAN TROUSERS WOMAN CL 2 2775 ATHS

Article no 122196

Dirt, oil and water-repellent / 2 tuckable, CORDURA® reinforced, loose-hanging front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 front pockets / D-ring at waistband / 2 CORDURA®-reinforced back pockets one with flap / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Hammer loop / CORDURA® reinforced folding rule pocket with tool pocket, button and loop for sheath knife / Reinforced thigh panels in contrast colour / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA® reinforced leg ends / Metalfree garment / Detachable ID-card holder contains metal / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 class 2 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre. Reinforcement: 79% cotton FR, 20% polyamide, 1% anti-static fibre. **WEIGHT** 300 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** C34-C50.



GARMENTS WITH EXTRA HIGH ELECTRIC ARC PROTECTION

These garments made of our ATHP material provides a very high protection against electric arcs and can withstand energy equivalent to a full 16.8 cal/cm² in this protective layer.



ATHP FABRIC

The material has inherent flame protection and it is made from modacrylic, cotton and anti-static fibres. The surface is dirt, oil and water repellent. It is a heavier fabric than our ATHS fabric, but still provides great comfort with a soft reverse closest to the body. Thicker material provides better protection against electric arcs and these garments can withstand energy equivalent to a full 16.8 cal/cm² in this protective layer. This fabric provides excellent heat insulation and prevents second-degree burns, it is quick drying and has excellent moisture management properties. The fabric and the reflective tapes withstand all our high requirements. We recommend industrial washing at 60° for our ATHP garments. Leasing laundry-tested according to ISO 15797 for 50 washes.

WEIGHT: 395 g/m²

LOI: 35%

ATPV: 16.8 cal/cm²

HAF: 84.2%

EXTRA HIGH
ARC RATING



540



FLAME JACKET 4194 ATHP

Article no 119911

Dirt, oil and water-repellent / Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / 1 chest pocket with bellowed pocket bag, inside D-ring, pen strap and concealed snap fastening / 1 chest pocket with zip fastening / 2 front pockets with concealed snap fastening / Inside pockets with button / Inside mobile phone pocket with velcro fastening and loop for mobile phone earpiece / Adjustable waist and cuffs / Reflective tape around sleeves / Extended back / Metal free garment / 2-needle stitches on reflective tape / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 16.8 cal/cm² HAF: 84.2%, EN ISO 11612 A1 A2 B1 C1 F1, EN 1149-5 and EN 13034 Type PB [6] / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 54% modacrylic, 44% cotton, 2% anti-static fibre, dirt, oil and water-repellent. **WEIGHT** 395 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



EXTRA HIGH
ARC RATING



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FLAME HIGH VIS CRAFTSMAN TROUSERS CL 1 2094 ATHP

Article no 111619

Dirt oil and water-repellent / 2 tuckable, CORDURA® reinforced, loose-hanging front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 front pockets / D-ring at waistband / Double reinforced crotch seam / 2 back pockets one with flap / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening, D-ring and plastic ID-card holder / Hammer loop / CORDURA® reinforced folding rule pocket with tool pocket, button and loop for sheath knife / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA® reinforced leg ends / Metal-free garment / Detachable id-card holder contains metal / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 16.8 cal/cm² HAF: 84.2%, EN ISO 11612 A1 A2 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6] and EN ISO 20471 cl 1 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 54% modacrylic, 44% cotton, 2% anti-static fibre, dirt, oil and water repellent. Reinforcement: 79% cotton FR, 20% polyamide, 1% anti-static fibre. **WEIGHT** 395 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** C44-C62, C146-C156, D84-D116.



NEW



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FLAMESTAT HIGH VIS SHIRT CL 1 7051 ATS

Article no 124309

Reflective detailing on shoulders / Concealed snap fastening under front placket / 2 chest pockets with flap and concealed snap fastenings, 1 with pen loops / Cuffs with concealed snap fastening / Extended back / Side slits / Metalfree garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 9,9 cal/cm² HAF: 78,0% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 A2 B1 C1 F1, EN 1149-5, EN ISO 20471 class 1, fabric approved according to EN 13034 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 54% modacrylic, 44% cotton, 2% anti-static fibre. **WEIGHT** 240 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



NEW



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FLAMESTAT HIGH VIS SHIRT CL 3 7050 ATS

Article no 124178

Reflective detailing on shoulders / Concealed snap fastening under front placket / 2 chest pockets with flap and concealed snap fastenings, 1 with pen loops / Cuffs with concealed snap fastening / Extended back / Side slits / Metalfree garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 9,9 cal/cm² HAF: 78,0% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 A2 B1 C1 F1, EN 1149-5, EN ISO 20471 class 3, fabric approved according to EN 13034 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 54% modacrylic, 44% cotton, 2% anti-static fibre. **WEIGHT** 240 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



CORE

SEE PAGE 6
COLOUR 540

APPROVED
FOR WELDING



941



540



FLAMESTAT SHIRT 7200 ATSS

Article no 114095

Concealed snap fastenings under front placket opening / Cuffs with concealed snap fastenings / Extended back / 2 chest pockets with flap and concealed snap fastenings / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT 9,9 cal/cm² HAF:78,0%, EN ISO 11612 A1 A2 B1 C1 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 54% Modacrylic, 44% Cotton, 2% Antistatic fibre. **WEIGHT** 240 g/m². **COLOUR** 540 Dark Navy, 941 Dark Grey. **SIZE** XS-4XL.



CORE

SEE PAGE 6



540



FLAMESTAT SHIRT 7074 ATS

Article no 109425

Reflective detailing on shoulders / Concealed snap fastening under front placket / Cuffs with concealed snap fastening / Extended back / 2 chest pockets with flap and concealed snap fastenings, 1 with pen loops / Metalfree garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 9,9 cal/cm² HAF: 78,0% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 A2 B1 C1 F1, EN 1149-5 and fabric approved according to EN 13034 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 54% modacrylic, 44% cotton, 2% anti-static fibre. **WEIGHT** 240 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



CORE
SEE PAGE 6



171



FLAMESTAT HIGH VIS SWEATSHIRT CL 3 7076 SFLH

Article no 109428

Reflective detailing on shoulders / Elasticated band at neck, waist and cuffs / 5 cm gusset in side with gap in the reflective tape for comfort and freedom of movement / Approved in accordance with EN 61482-1-2 class 1, EN 61482-1-1 EBT: 18,9 cal/cm² HAF: 90,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1, EN 1149-5 and EN ISO 20471 class 2 - size XS-S and class 3 - size M-3XL / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 60% modacrylic, 37% cotton, 3% antistatic fibres. **WEIGHT** 400 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



CORE
SEE PAGE 6

NEW



171



FLAMESTAT LONG SLEEVE T-SHIRT CL 3 7077 TFLH

Article no 125041

Reflective detailing on shoulders / Rib-knitted band at neck and cuffs / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 5,9 cal/cm² HAF: 78,9% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1, EN 1149-5 and EN ISO 20471 class 3 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 60% modacrylic, 37% cotton, 3% anti-static fibre. **WEIGHT** 230 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



CORE
SEE PAGE 6



540



FLAMESTAT T-SHIRT 7073 TFLH

Article no 110736

Reflective detail on shoulders / Rib-knitted band at neck / Worn together with EN ISO 11612 garments / Approved according to EN ISO 14116 Index 3 and EN 1149-5 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 60% modacrylic, 37% cotton, 3% antistatic fibres. **WEIGHT** 230 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



CORE
SEE PAGE 6



540



FLAMESTAT LONG SLEEVE T-SHIRT 7072 TFLH

Article no 111842

Reflective detailing on shoulders / Rib-knitted band at neck and cuffs / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 5,9 cal/cm² HAF: 78,9% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 and EN 1149-5 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 60% modacrylic, 37% cotton, 3% anti-static fibre. **WEIGHT** 230 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.





WARM, SOFT AND COMFORTABLE PROTECTION

A fleece jacket keeps you warm at the same time as it lets excess heat pass through and transports moisture away from your body. It's also the perfect garment to wear as a second layer under a jacket. Our soft, flexible and comfortable fleece jackets have inherent flame protection and are also certified according to the electric arc and electrostatic discharge norms. Wear together with flame-protective underwear. These jackets are included in our unique electric arc-tested garment combinations. Please see the table on page 57.

PERFECT AS OUTERWEAR OR AS LAYER 2 GARMENTS

CORE
SEE PAGE 6



940



FLAMESTAT FLEECE JACKET 7044 MFR

Article no 121649

Front placket opening with zip to top of collar / Extended back / Thumb grips / Brushed inside / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 5,1 cal/cm² HAF:80% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C2 and EN 1149-5.

MATERIAL 57% modacryl, 36% cotton, 5% elastane, 2% antistatic fiber. **WEIGHT** 400 g/m². **COLOUR** 940 Black. **SIZE** S-3XL.



540



FLAMESTAT FLEECE JACKET 4073 ATF

Article no 109430

Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / Chest pocket with concealed zip and D-ring / 2 front pockets / Drawstring at hem / Reflective tape on sleeves / Thumb grip / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 6,9 cal/cm² HAF: 86,8% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1 and EN 1149-5 / OEKO-TEX® certified.

MATERIAL 50% modacryl, 30% cotton, 18% polyester, 2% anti-static fibre. **WEIGHT** 370g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



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FLAMESTAT HIGH VIS FLEECE JACKET CL 3 4063 ATF

Article no 122233

Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / D-ring / Chest pocket with concealed zip / 2 front pockets / Drawstring at hem / Thumb grip / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 6,9 cal/cm² HAF: 86,8% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN ISO 20471 class 2 - size XS and class 3 - size S-3XL / OEKO-TEX® certified.

MATERIAL 50% modacrylic, 30% cotton, 18% polyester, 2% anti-static fiber. **WEIGHT** 370 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



KEEP THE COLD AWAY

Our lined Flamestat garments are made from a material with inherent flame-retardant protection. Lined with fleece and soft, silky, quilted lining for exceptional comfort. Leasing laundry-tested according to ISO 15797 for 25 washes. The key to effective protection is to wear the right garments from the inside out. Wear flame-retardant underwear closest to your body and you will further increase your safety and comfort.



NEW

LINED HOOD
FOR WINTER
JACKET



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FLAMESTAT WINTER HOOD 9185 ATHS

Article no 125064

Lined hood for use with 119923 / Reflective detailing at top / Adjustable with drawstring / Metal free / Can be used over helmet / Certification only valid when worn together with winter jacket 119923 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static **WEIGHT** 300 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



CORE

SEE PAGE 6

WINTER HOOD
125064 CAN
BE ATTACHED



171



FLAMESTAT HIGH VIS WINTER JACKET CL 3 4185 ATHS

Article no 119923

Dirt, oil and water-repellent / Fully lined with fleece in body and silky and soft quilted lining in sleeve / Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / Fleece-lined collar / 1 chest pocket with bellowed pocket bag, inside D-ring, pen strap and concealed snap fastening / 1 chest pocket with zip fastening / Buttons and loop for sheath knife on left chest / Microphone holder on left front side / 2 fleece-lined front pockets with concealed snap fastening / Map pocket with inside mobile phone pocket accessible from outside / 2 inside pockets 1 with button and 1 mobile phone pocket with velcro fastening and earpiece loop / Elastic cuffs inside sleeves / Extended back / Adjustable drawstring at hem / Zip in lining for easy embroidery and transfer / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 main fabric EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6], EN ISO 20471 class 2 - size XS and class 3 - size S-3XL and EN 342 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibers, dirt, oil and water repellent. Fleece lining 50% modacryl, 30% cotton, 18% polyester, 2% anti-static fibre. Silky quilted lining 40% modacrylic, 37% viscose FR, 22% viscose, 1% anti-static fiber. **WEIGHT** Outer fabric 300 g/m², fleece lining 370 g/m², silky quilted lining 260 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



ELECTRIC ARC CERTIFIED COMBINATION

Read more and see the exact values for different garment combinations on pages 14-15, 57

**THE THREE GARMENTS ARE
ARC-TESTED TOGETHER TO
GET THE EXACT VALUE**



**FLAMESTAT LONG SLEEVE
T-SHIRT 7026 MOF 121639**

+



**FLAMESTAT HIGH VIS SHIRT CL 1
7051 ATS 124309**

+



**FLAMESTAT HIGH VIS WINTER
PARKA CL 3 4086 ATHR 109423**

=



Open arc result

EN 61482-1-1

ATPV 67,3cal/cm²

HAF 95,4%

Box test approved: ☒

EN 61482-1-2 CLASS 2

CORE

SEE PAGE 6



171



171



FLAMESTAT HIGH VIS WINTER PARKA CL 3 4086 ATHR

Article no 109423

Breathable, wind and waterproof / Fleece-lined in body and silky and soft lining in sleeve / Reflective detailing on shoulders / Front placket opening with zip to top of collar and concealed snap fastening / Fleece-lined collar / Detachable lined hood with drawstring / Microphone holder / Concealed buttons and loop for sheath knife / 2 chest pockets with flaps and concealed snap fastening, 1 with D-ring and 1 with tool loops / 2 front pockets with pocket flaps with concealed snap fastening, both with fleece-lined hand-warmer pocket with side opening / Map pocket with inside mobile phone pocket / 2 inside pockets, 1 with button and 1 mobile phone pocket with velcro fastening and earpiece loop / Elastic inner cuff / Adjustable waist with drawstring / Zip in lining for easy embroidery and transfer / Metal free garment / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 main fabric EBT: 9,9 cal/cm² HAF: 78% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6], EN ISO 20471 class 3, EN 342 and EN 343 class 3/1. Shell fabric meets class 3 for water vapour permeability; EN 343 class 3/3. / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL Outer fabric 50% modacrylic, 41% cotton, 7% PU, 2% anti-static fibre 2-layer laminate, breathable, wind and waterproof. Taped seams. Fleece lining 50% modacrylic, 30% cotton, 18% polyester, 2% anti-static fibre. Silky quilted lining: 40% modacrylic, 37% viscose FR, 22% viscose, 1% anti-static fibre. **WEIGHT** Outer fabric 300 g/m², fleece lining 370 g/m², silky quilted lining 260 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



FLAMESTAT HIGH VIS WINTER TROUSERS CL 2 2085 ATHS

Article no 109424

Dirt, oil and water-repellent / Fully lined with silky and soft quilted lining / Elastic detachable braces / Belt loops / D-ring / 2 front pockets with concealed zips / Double reinforced crotch seam / 2 back pockets / CORDURA® reinforced folding rule pocket with tool pocket / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastener and D-ring with plastic ID-card holder / Pre-shaped knees / CORDURA® reinforced knee pockets with inside opening for height-adjustable knee pads / CORDURA® reinforced thigh panel in contrast colour / Thigh pocket with flap and concealed snap fastening / Concealed zip up to knees / Snow gaiters / Adjustable, CORDURA® reinforced leg ends / EN 61482-1-2 class 1, EN 61482-1-1 main fabric EBT: 10,5 cal/cm² HAF: 81,4% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 F1, EN 1149-5, EN 13034 Type PB [6], EN ISO 20471 class 2 and EN 342 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL Outer fabric 45% modacrylic, 35% cotton, 18% polyamide, 2% anti-static fibre, dirt, oil and water repellent. Reinforcement 79% FR cotton, 20% polyamide, 1% anti-static fibre. Silky quilted lining 40% modacrylic, 37% viscose FR, 22% viscose, 1% anti-static fibre. **WEIGHT** Outer fabric 300 g/m², silky quilted lining 260 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



PROTECTIVE CLOTHING FOR WORKING WITH MOLTEN IRON AND ALUMINIUM

Jacket and trousers for working in foundries and working with molten iron and aluminium, certification requirements D3 and E3. Designed to withstand dirt in the best way and with visible details.

MFAT FABRIC

Our MFAT fabric is an inherent flame retardant fabric, which is designed to protect the wearer from splashes of molten metal in the foundry sector. The material's composition, 50% viscose FR, 30% wool, 18% polyamide, 2% anti-static fibre, combines viscose FR with nature's own natural anti-flame fibre, wool, which together have very good thermal insulation properties. The polyamide fibres with their strong properties provide further strength. MFAT has the highest degree of protection according to EN ISO 11612 D3 for protection against splashes from molten aluminium and E3 for splashes of molten iron.

- Inherent flame protection
- D3 molten aluminium protection
- E3 molten iron protection
- Welding protection
- Heat and flame protection
- Electric arc protection
- Electrostatic discharge protection
- Approved for 50 washes at 60°



540



Value added service:
Extension at front legs
ends to protect shoes.



540



EN 61482 EN 11612 EN 11611 EN 1149

FLAMESTAT JACKET 4966 MFAT

Article no 111632

High collar / Front placket opening with zip to top of collar and concealed metal snap fastening / Raglan sleeves / 2 chest pockets with flap and concealed snap fastening / 2 front pockets with flap, concealed snap fastening at lower edge / Inside pocket with mobile phone pocket and loop for mobile phone earpiece / Velcro-adjustable cuffs / Buttons to adjust waist / Extended back / High visibility detailing at shoulders and sides / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C2 D3 E3 F1, EN ISO 11611 class 1 and EN 1149-5.

MATERIAL 50% viscose, 30% wool, 18% polyamide, 2% antistatic fibres. **WEIGHT** 365 g/m².

COLOUR 540 Dark Navy **SIZE** 2XS-4XL.



EN 61482 EN 11612 EN 11611 EN 1149

FLAMESTAT TROUSERS 2155 MFAT

Article no 111635

Waistband with belt loops and concealed metal button / Front pockets with side openings / Back pockets with flap and concealed metal snap fasteners / Leg pocket with flap and concealed metal snap fastening / Plain folding rule pocket with loose bottom / Pre-shaped knees / Knee pockets with inside opening for height adjustable knee pads / High visibility details at waist band and sides of knees / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C2 D3 E3 F1, EN ISO 11611 class 1 and EN 1149-5.

MATERIAL 50% viscose, 30% wool, 18% polyamide, 2% antistatic fibres. **WEIGHT** 365 g/m².

COLOUR 540 Dark Navy **SIZE** C44-C62, C146-C160, D84-D116.



FLAME AND FLAME WELDING

A comfortable collection made of durable, flame retardant-treated material which is also electric arc-tested. Several of the garments are approved for welding. The FLAME collection is manufactured from our hardwearing FLAM fabric. The high cotton content gives you a comfortable feel. All our winter jackets are treated to provide a surface that repels dirt, oil and water. Most of the garments in this collection are also OEKO-TEX® certified.

Napoleon pocket under right chest pocket

Vertical pocket under front placket with zip accessible from outside

Inside phone pocket with velcro fastening and loop for earpiece

2 reinforced, loose-hanging front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops

Hammer loop

Reinforced folding rule pocket with tool pocket, concealed button and loop for sheath knife

CORDURA® reinforced knee pockets with height adjustment for knee pads

Front placket opening with zip to top of collar and concealed snap fastening

Concealed button and loop for sheath knife

2 chest pockets, one with with extra pocket and pen pocket

Adjustable cuffs with velcro fastener

2 front pockets

Extended back

Adjustable waist with buttons

2 reinforced back pockets

2 front pockets

Leg pocket with flap and and concealed snap fastening, phone pocket with flap and velcro fastening

Pre-shaped knees

FLAM FABRIC

Our FLAM fabric is a durable material in 75% cotton and 25% polyester. The high proportion of cotton provides easy comfort next to the body. The material is flame retardant treated and withstands the heat from an electric arc. Leasing laundry-tested according to ISO 15797 for 50 washes.

WEIGHT: 365 g/m² **LOI:** 28%

FLAME

A comfortable collection in durable, flame retardant treated material that is also electric arc tested. Several of the garments are approved for welding, see next spread.

- Heat and flame protection
- Electric arc protection
- High cotton comfort
- Flame retardant treated
- OEKO-TEX® certified
- Leasing laundry tested according to ISO 15797
- Approved for 50 washes at 60°. Winter garments approved for 25 washes at 60°.



540



FLAME JACKET 4030 FLAM

Article no 100333

Front placket opening with zip to top of collar and concealed snap fastening / 2 chest pockets, 1 with flap and concealed snap fastening and 1 with extra pocket and pen pocket / Napoleon pocket under right chest pocket / Inside pocket with zip accessible from outside / Concealed button and loop for sheath knife / 2 front pockets / Inside phone pocket with velcro fastening and loop for earpiece / Adjustable cuffs with velcro fastener / Adjustable waist with buttons / Extended back / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester. **WEIGHT** 365 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-2XL.



CORE

SEE PAGE 6



540



FLAME CRAFTSMAN TROUSERS 2030 FLAM

Article no 100329

2 reinforced, loose-hanging front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 front pockets / 2 reinforced back pockets / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening / Hammer loop / Reinforced folding rule pocket with tool pocket, concealed button and loop for sheath knife / Pre-shaped knees / Knee pockets with inside opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 and EN 14404 together with kneepads 124292 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester. **WEIGHT** 365 g/m². **COLOUR** 540 Dark Navy.

SIZE C44-C62, C146-C156, D92-D116.



540



FLAME BIB'N'BRACE 0030 FLAM

Article no 100328

Front placket opening with two-way, full-length front zip and concealed snap fastening / 2 loose-hanging chest pockets with snap fastening, 1 with flap and concealed snap fastening and 1 with extra pocket and pen pocket / Concealed button and loop for sheath knife / Elasticated braces / 2 tuckable, reinforced, loose-hanging pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 front pockets / 2 reinforced back pockets / Leg pocket with flap and concealed snap fastening, phone pocket with flap and velcro fastening / Hammer loop / Reinforced folding rule pocket with tool pocket, concealed button and loop for sheath knife / Pre-shaped knees / Knee pockets with inside opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 and EN 14404 together with kneepads 124292 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester. **WEIGHT** 365 g/m². **COLOUR** 540 Dark Navy. **SIZE** C46-C62.





540



FLAME WAISTCOAT 5030 FLAM

Article no 100336

Front placket opening with zip and concealed snap fastening / 2 loose-hanging chest pockets with snap fastening, 1 with flap and concealed snap fastening and 1 with extra pocket and pen pocket / Napoleon pocket under right chest pocket / Inside pocket with zip reachable from outside / Concealed button and loop for sheath knife / 2 front pockets / Inside phone pocket with velcro fastening and loop for earpiece / 2 reinforced loose-hanging front pockets, left pocket with extra pocket and right pocket with 3 pockets and tool loops / 2 reinforced loose-hanging back pockets, both with extra tool pocket / Belt loops / 2 hammer loops / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 all certification together with shirt 100348 and 114095 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester. **WEIGHT** 365 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-2XL.



CORE
SEE PAGE 6



540



FLAME SWEATSHIRT 984 SFLA

Article no 100581

Elasticated band at neck, wrists and hem / Chest pocket / Approved according to EN 61482-1-2 class 1 (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 and EN 1149-5.

MATERIAL 60% modacrylic, 38% cotton, 2% antistatic fibers. **WEIGHT** 390 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



CORE
SEE PAGE 6



540



FLAME SHIRT 7207 FRS

Article no 122194

Concealed snap fastenings under front placket / 2 chest pockets with flap and concealed snap fastening, 1 with pen pocket / Cuffs with concealed snap fastenings / Extended back / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 7,6 cal/cm² HAF: 70%, EN ISO 11612 A1 A2 B1 C1 E1 / OEKO-TEX® certified.

MATERIAL 100% cotton FR. **WEIGHT** 230 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-4XL.



CORE
SEE PAGE 6



540



FLAME LONG SLEEVE POLO SHIRT 784 PFLA

Article no 100472

Short front panel / Chest pocket / Long-sleeved / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 and EN 1149-5.

MATERIAL 60% modacrylic, 38% cotton, 2% antistatic fibers. **WEIGHT** 255 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-3XL.



FLAME WELDING

Specially designed to provide optimum protection and comfort for welders.

- Heat and flame protection
- Electric arc protection
- Welding protection
- High cotton comfort
- Flame retardant treated
- OEKO-TEX® certified
- Leasing laundry tested according to ISO 15797
- Approved for 50 washes at 60°.
- Winter garments approved for 25 washes at 60°.



LEATHER APRON 9330 LTHR

Article no 100867

With bib / Nylon waist and neck straps / Length 87 cm, waist width 56 cm.

MATERIAL 100% heavy duty split leather.
COLOUR 240 Brown. **SIZE** One size.

240



LEATHER LONG APRON 9331 LTHR

Article no 100868

Long, heavy duty apron / Nylon waist and neck straps / Bottom part divided by a seam / Length 116 cm and waist width 56 cm.

MATERIAL 100% heavy duty split leather.
COLOUR 240 Brown. **SIZE** One size.

240

CORE

SEE PAGE 6



540



FLAME WELDING JACKET 4031 FLAM

Article no 100334

Front placket opening with zip to top of collar and concealed snap fastening / 2 chest pockets with flaps and concealed snap fastening / Inside pocket with button and mobile pocket with velcro fastening and loop for earpiece / 2 front pockets with flap and concealed snap fastening / Adjustable cuffs with velcro fastener / Adjustable waist with buttons / Extended back / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 and EN ISO 11611 A1 class 1 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester. **WEIGHT** 365 g/m². **COLOUR** 540 Dark Navy. **SIZE** XS-2XL.



CORE

SEE PAGE 6



540



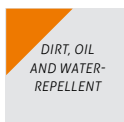
FLAME WELDING TROUSERS 2031 FLAM

Article no 100330

2 front pockets / 2 reinforced back pockets with flaps and concealed snap fastening / Leg pocket with flap and concealed snap fastening / Reinforced folding rule pocket with tool pocket / Pre-shaped knees / Knee pockets with inside opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1, EN ISO 11611 A1 class 1 and EN 14404 together with kneepads 124292 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester. **WEIGHT** 365 g/m². **COLOUR** 540 Dark Navy. **SIZE** C44-C62, C146-C156, D92-D116.





540

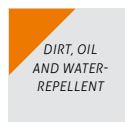


FLAME WINTER JACKET 4032 FLI

Article no 100342

Dirt, oil and water-repellent / Fully lined / Front placket opening with zip to top of collar and concealed snap fastening / 2 chest pockets with flaps and concealed snap fastening / 2 inside pockets with button, right with mobile pocket with velcro fastening and loop for earpiece / 2 front pockets with flap and concealed snap fastening / Elasticated inner cuff / Adjustable waist with buttons / Extended back / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 and EN ISO 11611 A1 class 1 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester dirt oil and water-repellent. Quilted lining: 50% cotton FR, 50% polyester FR. **WEIGHT** Outer fabric 320 g/m², lining 315 g/m². **COLOUR** 540 Dark Navy. **SIZE** S-2XL.



540



FLAME WINTER PARKA 4033 FLI

Article no 100343

Dirt, oil and water-repellent / Fully lined / Detachable lined hood with drawstring / Front placket opening with zip to top of collar and concealed snap fastening / 2 chest pockets with flaps and concealed snap fastening, left with tool loops / 2 inside pockets with button, right with mobile pocket with velcro fastening and loop for earpiece / 2 front pockets with flap and concealed snap fastening / Elasticated inner cuff / Adjustable waist with inside drawstring / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1 and EN ISO 11611 A1 class 1 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester dirt oil and water-repellent. Quilted lining: 50% cotton FR, 50% polyester FR. **WEIGHT** Outer fabric 320 g/m², Lining 315 g/m². **COLOUR** 540 Dark Navy. **SIZE** S-2XL.

**CORE**

SEE PAGE 6



540



FLAME WELDING COVERALL 8030 FLAM

Article no 100338

Front placket opening with two-way, full-length front zip and concealed snap fastening / 2 chest pockets with flap and concealed snap fastening, left with tool loops / Inside pocket with button and mobile pocket with Velcro fastening and loop for earpiece / 2 front pockets / Covered side opening to inside / Adjustable cuffs with Velcro fastener / Adjustable waist / 2 reinforced back pockets with flap and concealed snap fastening / Leg pocket with flap and concealed snap fastening / Reinforced folding rule pocket with tool pocket / Pre-shaped knees / Knee pockets with inside opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 B1 C1, EN ISO 11611 A1 class 1 and EN 14404 together with kneepads 124292 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 75% cotton FR, 25% polyester. **WEIGHT** 365 g/m². **COLOUR** 540 Dark Navy. **SIZE** Regular: S-2XL.

**CORE**SEE PAGE 6
COLOUR 540

941



540



FLAME SHIRT 7200 ATSS

Article no 114095

Concealed snap fastenings under front placket opening / Cuffs with concealed snap fastenings / Extended back / 2 chest pockets with flap and concealed snap fastenings / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT:9.9cal/cm² HAF:78.0% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 A2 B1 C1 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL 54% Modacrylic, 44% Cotton, 2% Antistatic fibre. **WEIGHT** 240 g/m². **COLOUR** 540 Dark Navy, 941 Dark Grey. **SIZE** XS-4XL.



FLAME FLAMTECH®

Our FlamTech® collection consists of high visibility garments that have a broad protective function. The material is flame retardant treated and can withstand both the heat from an electric arc and the high temperature from molten iron. In addition, it is approved for welding. Trousers in D-sizes are not in stock, but available as make to order solution. 5 weeks delivery time. At least 2 garments per size.

- Electric arc protection
- Welding protection
- Electrostatic discharge protection
- Molten iron protection
- High visibility certified
- Flame retardant treated
- Leasing laundry tested according to ISO 15797
- Approved for 25 washes at 60°.



FLAMTECH® FABRIC

The FlamTech® (FBPA and FWA) flame retardant treated fabric is made of 64% cotton, 34% polyester and 1% anti-static fibres. The high proportion of cotton makes the garments comfortable to wear. The lined garments have been treated to obtain a dirt, oil and water repellent surface. Both the fabrics and the reflective tapes meet all of our high requirements. We recommend industrial washing at 60° for all of our garments in FlamTech®. Leasing laundry-tested according to ISO 15797 for 25 washes.

WEIGHT: 350 g/m² **LOI:** 28%



FLAME HIGH VIS JACKET CL 3 4846 FBPA

Article no 101050

FlamTech® / Zip and buttons to top of collar / 2 chest pockets right with D-ring / 2 front pockets with concealed zip / Adjustable sleeves / Reflective tape over shoulder / Extended back / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 13 cal/cm² HAF:81%, EN ISO 11612 A1 A2 B1 C1 E2 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5 and EN ISO 20471 class 2 size XS-M and class 3 size L-3XL / Leasing laundry-tested according to ISO 15797.

MATERIAL 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech®. **WEIGHT** 350 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL



See separate size table on page 63



FLAME HIGH VIS TROUSERS CL 2 2042 FBPA

Article no 101046

FlamTech® / 2 front pockets / 2 back pockets with flaps / Leg pocket with flap, phone pocket with flaps and velcro fastening and concealed ID-card holder / Folding rule pocket / Pre-shaped knees / Knee pockets with opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 13 cal/cm² HAF:81%, EN ISO 11612 A1 A2 B1 C1 E2 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5 and EN ISO 20471 class 1 - size C44 and class 2 - size C46-C64 and C146-C156 / Leasing laundry-tested according to ISO 15797 / Sizes D84-D120 available as made to order solution.

MATERIAL 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech®. **WEIGHT** 350 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** C44-C64, C146-C156. Available as make to order solution: D84-D120.





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See separate size table on page 63



IEC 61482 EN 11612 EN 11611 EN 1149 EN 20471

FLAME HIGH VIS BIB'N'BRACE CL 2 1022 FBPA

Article no 108652

FlamTech® / 2 front pockets / Back pocket with flap / Leg pocket with flap, phone pocket with flap and velcro fastening and concealed ID-card holder / Pre-shaped knees / Knee pockets with opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 13 cal/cm² HAF:81%, EN ISO 11612 A1 A2 B1 C1 E2 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5 and EN ISO 20471 class 2 / Leasing laundry-tested according to ISO 15797.

MATERIAL 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech®. **WEIGHT** 350 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** C44-C64, C146-C156.



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See separate size table on page 63



IEC 61482 EN 11612 EN 1149 EN 20471

FLAME HIGH VIS CRAFTSMAN TROUSERS CL 2 2050 FBPA

Article no 108653

FlamTech® / 2 front pockets / 2 loose-hanging front pockets, one with extra pocket and tool loops, one with 2 small pockets / 2 back pockets with flaps / Leg pocket with flaps, phone pocket with flaps and velcro fastening and concealed ID-card holder / Folding rule pocket / Pre-shaped knees / Knee pockets with opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 13 cal/cm² HAF:81%, EN ISO 11612 A1 A2 B1 C1 F1, EN 1149-5 and EN ISO 20471 class 1 - size C44-C50 and C146-C150. Class 2 - size C52-C64 and C152-C156 / Leasing laundry-tested according to ISO 15797 / Sizes D84-D120 available as made to order solution.

MATERIAL 65% cotton FR, 34% polyester, 1% anti-static fibres, FlamTech®. **WEIGHT** 350 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** C44-C64, C146-C156. Available as made to order solution: D84-D120.



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See separate size table on page 63



IEC 61482 EN 11612 EN 11611 EN 1149 EN 20471

FLAME HIGH VIS TROUSERS CL 1 2051 FBPA

Article no 108655

FlamTech® / 2 front pockets / 2 back pockets with flaps / Leg pocket with flap, phone pocket with flaps and velcro fastening and concealed ID-card holder / Folding rule pocket / Pre-shaped knees / Knee pockets with opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 13 cal/cm² HAF:81%, EN ISO 11612 A1 A2 B1 C1 E2 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5 and EN ISO 20471 class 1 / Leasing laundry-tested according to ISO 15797 / Sizes D84-D120 available as made to order solution.

MATERIAL 65% cotton FR, 34% polyester, 1% anti-static fibres, FlamTech®. **WEIGHT** 350 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** C44-C64, C146-C156. Available as made to order solution: D84-D120.



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IEC 61482 EN 11612 EN 11611 EN 1149 EN 20471

FLAME HIGH VIS COVERALL CL 3 8626 FBPA

Article no 108654

FlamTech® / Zip and buttons to top of collar / Adjustable sleeves / 2 chest pockets right with D-ring / 2 front pockets / 2 back pockets with flaps / Leg pocket with flap, phone pocket with flap and velcro fastening and concealed ID-card holder / Folding rule pocket / Reflective tape over shoulder / Action back / Drawstring at waist / Pre-shaped knees / Knee pockets with opening for height-adjustable knee pads / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 ATPV: 13 cal/cm² HAF:81%, EN ISO 11612 A1 A2 B1 C1 E2 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5 and EN ISO 20471 class 3 / Leasing laundry-tested according to ISO 15797.

MATERIAL 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech®. **WEIGHT** 350 g/m².

COLOUR 171 Hi-Vis Yellow/Navy. **SIZE** Regular: S-3XL.





FLAME HIGH VIS WINTER PARKA CL 3 4853 FWA

Article no 108082

FlamTech® water-repellent / Fully lined / Zip and buttons to top of collar / Concealed snap fasteners in collar for detachable hood 108083 / 2 chest pockets right with D-ring / 2 front pockets with concealed snap fastening / Reflective tape over shoulders / Drawstring waist / Elasticated cuffs / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 A2 B1 C1 E2 F1, EN 11611 A1 A2 class 1, EN 1149-5, EN ISO 20471 class 3 and EN 342 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL Outer fabric 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech® water-repellent. Quilted lining 50% cotton FR, 50% polyester FR. **WEIGHT** Outer fabric 300 g/m², lining 252 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



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FLAME HIGH VIS WINTER JACKET CL 3 4852 FWA

Article no 108081

FlamTech® water-repellent / Fully lined / Zip and buttons to top of collar / Concealed stud fasteners in collar for detachable hood 108083 / 2 chest pockets right with D-ring / 2 front pockets with concealed zip/ Reflective tape over shoulders / Drawstring waist/elasticated cuffs / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 A2 B1 C1 E2 F1, EN 11611 A1 A2 class 1, EN 1149-5, EN ISO 20471 class 2 size XS and class 3 size S-3XL and EN 342 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL Outer fabric 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech® water-repellent. Quilted lining 50% cotton FR, 50% polyester FR. **WEIGHT** Outer fabric 350 g/m², lining 315 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



171



LINED HOOD FOR
JACKET, PARKA
AND COVERALL



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FLAME HIGH VIS WINTER HOOD 9390 FWA

Article no 108083

FlamTech® dirt oil and water-repellent / Lined hood for use with winter garments 108081, 108082 and 108084 / Drawstring / Snap fasteners at front / Snap fasteners to attach relevant garments / Certification only valid when worn together with winter garments 108081, 108082 and 108084.

MATERIAL Outer fabric 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech® water-repellent. Quilted lining 50% cotton FR, 50% polyester FR. **WEIGHT** Outer fabric 350 g/m², lining 252 g/m². **COLOUR** 130 Hi-Vis Yellow. **SIZE** XS-3XL.



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FLAME HIGH VIS WINTER TROUSERS CL 2 2049 FWA

Article no 108085

FlamTech® water-repellent / Fully lined / Detachable braces / Fly / Elasticated waistband / Belt loops / 2 front pockets / 2 back pockets with flaps / Folding rule pocket with ID-card holder / Pre-shaped knees / Knee pockets with opening for height-adjustable knee pads / Zip up to knee on outside leg / Adjustable leg ends / Inside snow gaiter / Approved according to EN 61482-1-2 class 1, EN ISO 11612 class A1 A2 B1 C1 E2 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5, EN ISO 20471 class 1 size XS and class 2 size S - 3XL and EN 342 / Leasing laundry-tested according to ISO 15797.

MATERIAL 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech® water-repellent / Quilted lining: 50% cotton FR, 50% polyester FR. **WEIGHT** Outer fabric 350 g/m², lining 315 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** XS-3XL.



HOOD CAN BE
ATTACHED



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FLAME HIGH VIS WINTER COVERALL CL 3 8625 FWA

Article no 108084

FlamTech® water-repellent / Fully lined / Two-way zip and buttons to top of collar / Concealed snap fasteners in collar for detachable hood 108083 / 2 chest pockets right with D-ring / 2 front pockets / 2 back pockets with flap/reflective tape over shoulders / Adjustable elasticated waist / Elasticated cuffs / Folding rule pocket with ID-card holder / Pre-shaped knees / Knee pockets with opening for height-adjustable knee pads / Zip up to knee on outside leg / Adjustable leg ends / Inside snow gaiter / Approved according to EN 61482-1-2 class 1, EN ISO 11612 class A1 A2 B1 C1 E2 F1, EN ISO 11611 A1 A2 class 1, EN 1149-5, EN ISO 20471 class 3 and EN 342 / Leasing laundry-tested according to ISO 15797 / OEKO-TEX® certified.

MATERIAL Outer fabric 65% cotton FR, 34% polyester, 1% antistatic fibres, FlamTech® water-repellent. Quilted lining 50% cotton FR, 50% polyester FR. **WEIGHT** Outer fabric 350 g/m², lining 252 g/m². **COLOUR** 171 Hi-Vis Yellow/Navy. **SIZE** Regular: XS-3XL.



RAIN WEAR

Our rainwear are certified high visibility garments with flame retardant protection and electrostatic discharge protection. The rain jacket and trousers should be worn over protective garments certified according to EN 11612. The jacket has a detachable hood and many useful pockets including a chest pocket for a communication radio.



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EN 14116 EN 1149 EN 20471 EN 343

FLAME HIGH VIS RAIN JACKET CL 3 4845 RSHF

Article no 101038

Detachable drawstring hood / Buttons and zip / Pocket for communication radio / 2 front pockets, 1 with inside mobile phone pocket / Ventilation at back yoke / Adjustable cuffs / Reflective tape over shoulder / Worn over EN ISO 11612 garments / Approved according to EN ISO 14116, EN 1149-5, EN ISO 20471 class 3 and EN 343 class 3/1.

MATERIAL 100% polyester FR PU-coated. **WEIGHT** 170 g/m². **COLOUR** 130 Hi-Vis Yellow. **SIZE** XS-3XL.



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EN 14116 EN 1149 EN 20471 EN 343

FLAME HIGH VIS RAIN TROUSERS CL 2 2047 RSHF

Article no 101056

Adjustable waist / Adjustable legs / Adjustable elasticated braces / Worn over EN ISO 11612 garments / Approved according to EN ISO 14116, EN 1149-5, EN ISO 20471 class 2 and EN 343 class 3/1.

MATERIAL 100% polyester FR PU-coated. **WEIGHT** 170 g/m². **COLOUR** 130 Hi-Vis Yellow. **SIZE** XS-3XL.





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IEC 61482 EN 11612 EN 1149

FLAMESTAT DEVOLD® BEANIE 9109 FR

Article no 117247

Flame retardant beanie / Knitted / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 A2 B1 C1 and EN 1149-5.

MATERIAL 50% viscose FR®, 40% merino wool, 8% polyamide, 2% antistatic fibres.
WEIGHT 230 g/m². **COLOUR** 940 Black. **SIZE** One size.



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EN 14116

FLAMESTAT BELT 9999 FR

Article no 117320

Flame retardant / Webbing / Buckle of polyamide 6.6 with Fristads Kansas logo engraved / Adjustable length / Length 130 cm / Width 38 mm / Approved according to EN ISO 14116 / Leasing laundry-tested according to ISO 15797.

MATERIAL 58% polyester, 23% modacrylic, 19% cotton. Buckle of polyamide 6.6.
WEIGHT 230 g/m². **COLOUR** 940 Black. **SIZE** One size.



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EN 14116 EN 1149

FLAMESTAT SOCKS 980 SFA

Article no 100580

Approved to EN ISO 14116 and EN 1149-5.

MATERIAL 40% modacrylic, 27% cotton, 20% polyamide, 6% elastane, 7% antistatic fibres.
WEIGHT 230 g/m². **COLOUR** 540 Dark Navy. **SIZE** S(37/39), M(40/42), L(43/45), XL(46/48).



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EN 14116 EN 20471

FLAME HIGH VIS WAISTCOAT CL 3 5023 FHA

Article no 124295

Front zip / Chest pocket with velcro fastening / Worn over EN ISO 11612 garments / Approved according to EN ISO 14116 Index 1 and EN 20471 class 3, fabric is approved according to EN 1149-5.

MATERIAL 98% Polyester FR, 2% antistatic fibres. **WEIGHT** 120 g/m². **COLOUR** 130 Hi-Vis Yellow. **SIZE** 2XS/XS, S/M, L/XL, 2XL/3XL.



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EN 11612

FLAME ID-CARD POCKET 9174 PSTF

Article no 124315

Attached with snap fastening / Metal free / Approved according to EN ISO 11612 A1 / Sold in pack of 5 pcs.

MATERIAL 80% cotton, 19% polyester, 1% anti-static fibre.
WEIGHT 250 g/m². **COLOUR** 940 Black. **SIZE** One size.

INCREASE THE SAFETY – DRESS LAYER ON LAYER

Flame retardancy prevents flames from spreading. However, heat can spread through the garment causing the skin to burn. If you wear flame retardant garments, they will protect against heat for a certain period. The period of time during which you are protected is increased if you also wear flame retardant underwear. The same applied to electric arc certified garments – wearing flame retardant underwear or several layers will increase protection, i.e. increase the arc rating and the amount of energy that the garment system can withstand. Read more on pages 12-15.



MOF FABRIC

Fristads MOF fabric is a blend of soft inherent modacrylic with top-class cotton and elastane in a flexible, single jersey quality.

The modacrylic fibre has an inherent permanent flame retardant protection and this combined with cotton, provides a stable and strong product with good thermal insulation properties. MOF is pre-shrunk and withstands machine washing. The material is approved for electric arc box test.



FLAMESTAT BRA 7036 MOF

Article no 121643

Racer back / Double layer of fabric at front / Elastic rib at bottom / Approved according to EN ISO 14116 Index 3 (fabric is approved according to EN ISO 11612 A1 B1 C1 and EN 61482-1-2 class 1) and EN 1149-5.

MATERIAL 58% modacrylic, 37% cotton, 3% elastane and 2% beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** S-2XL.



FLAMESTAT BRIEFS 7022 MOF

Article no 122230

Elasticated waist / Approved according to EN ISO 14116 Index 3 (fabric is approved according to EN ISO 11612 A1 B1 C1 and EN 61482-1-2 class 1) and EN 1149-5.

MATERIAL 58% Modacryl, 37% Cotton, 3% Elastan and 2% Beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** S-XL.



FLAMESTAT BOXERS 7031 MOF

Article no 121642

Elastic at waist / Slim fit / Approved according to EN ISO 14116 Index 3 (fabric is approved according to EN ISO 11612 A1 B1 C1 and EN 61482-1-2 class 1) and EN 1149-5.

MATERIAL 58% modacrylic, 37% cotton, 3% elastane and 2% beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** S-3XL.





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FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF

Article no 121639

Round neck / Long-sleeved / Approved according to EN 61482-1-2 class 1 (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 and EN 1149-5.

MATERIAL 58% modacrylic, 37% cotton, 3% elastane and 2% beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** XS-4XL.



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FLAMESTAT HALF ZIP 7029 MOF

Article no 121640

High collar with short zip / Long-sleeved / Approved according to EN 61482-1-2 class 1 (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 and EN 1149-5.

MATERIAL 58% modacrylic, 37% cotton, 3% elastane and 2% beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** XS-4XL.



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FLAMESTAT LONG JOHNS 7027 MOF

Article no 121641

Elastic waist / Approved according to EN 61482-1-2 class 1 (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C1 and EN 1149-5.

MATERIAL 58% modacrylic, 37% cotton, 3% elastane and 2% beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** XS-4XL.



FLAMESTAT BALACLAVA 7028 MOF

Article no 121644

Approved according to EN ISO 14116 Index 3 (fabric is approved according to EN ISO 11612 A1 B1 C1 and EN 61482-1-2 class 1) and EN 1149-5.

MATERIAL 58% modacrylic, 37% cotton, 3% elastane and 2% beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** One size.



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FLAMESTAT COLLAR 7038 MOF

Article no 121648

Approved according to EN ISO 14116 Index 3 (fabric is approved according to EN ISO 11612 A1 B1 C1 and EN 61482-1-2 class 1) and EN 1149-5.

MATERIAL 58% modacrylic, 37% cotton, 3% elastane and 2% beltron. **WEIGHT** 240 g/m². **COLOUR** 940 Black. **SIZE** One size.



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DEVOLD® UD FABRIC

Protection against heat/flame, electric arc and antistatic. Devold® UD is an elastic rib-knitted material of viscose, Merino wool, anti-static fibres and durable polyamide.

DEVOLD® UL FABRIC

Protection against heat/flame and electric arc. Devold® UL is dual layer underwear, knitted with Lenzing FR® and merino wool. The inner layer of Lenzing FR® feels like silk to your skin. Perfect for people who are sensitive to wool. OEKO-TEX® certified.

MFR FABRIC

Fristads MFR fabric is a flexible, thermally insulating, fleece with smooth outside and soft, brushed reverse. Perfect as layer 2 garments. Modacrylic, with inherent flame retardant properties, mixed with top-class cotton and elastane, provides permanent flame protection. The garments tested according to both electric arc box test and the open arc test. MFR fabric is pre-shrunk and withstands machine washing.

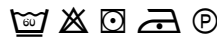


FLAMESTAT DEVOLD® LONG SLEEVE T-SHIRT 7436 UD

Article no 109848

Very elastic / Lightweight / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 A2 B1 C1 and EN 1149-5.

MATERIAL 49% Viscose FR®, 39% merino wool, 10% polyamide, 2% antistatic fibres.
WEIGHT 230 g/m². **COLOUR** 940 Black. **SIZE** XS-2XL.



FLAMESTAT DEVOLD® LONG JOHNS WOMAN 7432 UL

Article no 109843

2-layer / Elasticated waist / Approved according to EN 61482-1-2 class 1 and EN ISO 11612 A1 A2 B1 C1 / OEKO-TEX® certified.

MATERIAL 50% viscose FR, 50% merino wool. **WEIGHT** 230 g/m². **COLOUR** 940 Black. **SIZE** XS-XL.





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FLAMESTAT DEVOLD® T-SHIRT 7431 UD

Article no 109842

Very elastic / Lightweight / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 A2 B1 C1 and EN 1149-5.

MATERIAL 49% Viscose FR®, 39% merino wool, 10% polyamide, 2% antistatic fibres.
WEIGHT 230 g/m². **COLOUR** 940 Black. **SIZE** XS-2XL.



CORE
SEE PAGE 6



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FLAMESTAT FLEECE JACKET 7044 MFR

Article no 121649

Front placket opening with zip to top of collar / Extended back / Thumb grips / Brushed inside / Approved according to EN 61482-1-2 class 1, EN 61482-1-1 EBT: 5,1 cal/m² HAF:80% (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN ISO 11612 A1 B1 C2 and EN 1149-5.

MATERIAL 57% modacryl, 36% cotton, 5% elastane, 2% antistatic fiber. **WEIGHT** 400 g/m².
COLOUR 940 Black. **SIZE** S-3XL.



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FLAMESTAT DEVOLD® LONG JOHNS 7437 UD

Article no 109849

Very elastic / Lightweight / With fly / Approved according to EN 61482-1-2 class 1, EN ISO 11612 A1 A2 B1 C1 and EN 1149-5.

MATERIAL 49% Viscose FR®, 39% merino wool, 10% polyamide, 2% antistatic fibres.
WEIGHT 230 g/m². **COLOUR** 940 Black. **SIZE** S-2XL.



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FLAMESTAT FLEECE LONG JOHNS 7045 MFR

Article no 121650

Elasticated waist / Brushed inside / Approved according to EN 61482-1-2 class 1 (see Electric arc table for certified garment combinations for EN 61482-1-2 class 2 and open arc according to EN 61482-1-1), EN 61482-1-1 EBT: 5,1 cal/m² HAF:80%, EN ISO 11612 A1 B1 C2 and EN 1149-5.

MATERIAL 57% modacryl, 36% cotton, 5% elastane, 2% antistatic fiber. **WEIGHT** 400 g/m².
COLOUR 940 Black. **SIZE** S-3XL.



NORMS, CERTIFICATIONS AND FACTS



IEC 61482-2:2009

Certified and approved garments appropriate for use in work environments where there is a risk of electric arcs.

When there is a risk of being exposed to an electric arc, for example, when servicing equipment in non-arc-safe distribution plants or electrical switchboards, or when working on high voltage equipment, personnel are recommended to wear arc-approved protective clothing.

What protection does your clothing need to provide during an arc blast?

The plasma clouds, flames, radiation and metal splashes from the electrodes hit the fabric during an arc blast. When this occurs, the fabric has to provide sufficient insulation to prevent second-degree skin burns. An effective fabric used in an arc garment must provide shielding against the flame and metal splashes, as well as insulation from the intense heat. The standard IEC 61482-2 includes two test methods, EN 61482-1-1 (open arc) and EN 61482-1-2 (box test). Our garments are certified according to both test methods or one of them.

The garments must cover the whole body. For example, a jacket and trousers must be worn together with other personal protective equipment (PPE), including a helmet with protective visor, protective gloves and protective footwear (boots) to achieve the correct level of protection. Layering is very important and will increase protection – if you wear flame retardant underwear underneath your flame retardant garments you are protected for even better.



ARC TEST IEC/EN 61482-1-2:2014 – BOX TEST

EN 61482-1-2: Protective clothing against the thermal hazards of an electric arc. Part 1-2 – Method 2: Determination of arc protection class of material and clothing by using a constrained and directed arc.

The garments are tested and evaluated in two classes in the same test; a box test. (Voltage: 400 V, Duration: 500 ms, Frequency: 50Hz or 60Hz).

Class 1 = 4 kA (arc energy 168 kJ)

Class 2 = 7 kA (arc energy 320 kJ)

The result is approved or not approved and in the test reports the design is also commented on i.e. that the zip still works after exposure.



ARC TEST IEC/EN 61482-1-1:2009 – OPEN ARC TEST

EN 61482-1-1: Protective clothing against the thermal hazards of an electric arc. Part 1-1 – Method 1: Determination of the arc rating (ATPV or EBT50) of flame resistant material or clothing.

ATPV and EBT are both evaluated in the same test, an open arc test (EN 61482-1-1/ASTM F1959). If the material has more thermal insulation value than arc tensile strength in resistance to heat, then it will break open first. If the opposite is true, the material will allow burns before it breaks open. The lowest value is the one that is used in the marking of the garments. Neither is better than the other. In essence, EBT fabrics are typically more insulating than they are strong and ATPV materials are stronger than they are insulating. You should never make a clothing protection decision based on the fact that clothing has achieved an ATPV or EBT rating. They are regarded as functional equivalents.

Arc Thermal Performance Value (ATPV) is the incident energy on a material that results in a 50% probability that sufficient heat transfer through the specimen is predicted to cause the onset of second-degree burn injury based on the Stoll Curve. The higher the value, the better the protection.

Energy Break open Threshold: (EBT) is the incident energy on a material that results in a 50% probability of break open. Break open is defined as any open area at least 1.6 cm². The higher the value, the better the protection.

Both ATPV and EBT can be tested on single or multiple layers of material. When you test multiple layers, you will achieve a higher value than if the fabrics were tested separately because air trapped between the fabrics also has an insulating and protective effect.

Heat Attenuation Factor (HAF) is the measurement of the percentage of energy that is blocked by the material or material system.

SEE ALL ELECTRIC ARC TESTED GARMENT COMBINATIONS IN THE TABLE



We performed the electric arc tests with a large number of garment combinations to ensure the exact arc rating.
Read more on pages 14-15

	LAYER 1		LAYER 2		LAYER 3	RESULT
1. MOF+ATHS	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+		+	FLAMESTAT HIGH VIS JACKET CL 3 4175 ATHS Art no 119922	Open arc result EN 61482-1-1 EBT 26,7cal/cm² HAF 91,5% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640				FLAMESTAT HIGH VIS JACKET CL 2 4176 ATHS Art no 120929	
					FLAMESTAT JACKET 4174 ATHS Art no 119921	
					FLAMESTAT HIGH VIS JACKET WOMAN CL 3 4275 ATHS Art no 122195	
	FLAMESTAT LONG JOHNS 7027 MOF Art no 121641				FLAMESTAT HIGH VIS CRAFTSMAN TROUSERS CL 2 2075 ATHS Art no 109420	
					FLAMESTAT HIGH VIS CRAFTSMAN TROUSERS CL 1 2074 ATHS Art no 109417	
					FLAMESTAT HIGH VIS TROUSERS CL 1 2176 ATHS Art no 121355	
					FLAMESTAT TROUSERS 2144 ATHS Art no 121354	
					FLAMESTAT HIGH VIS BIB 'N' BRACE CL 2 1075 ATHS Art no 109419	
					FLAMESTAT HIGH VIS CRAFTSMAN TROUSERS WOMAN CL 2 2775 ATHS Art no 122196	
2. MOF+ATF	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+	FLAMESTAT HIGH VIS FLEECE JACKET CL 3 4063 ATF Art no 122233	+		Open arc result EN 61482-1-1 EBT 28,1cal/cm² HAF 93% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640		FLAMESTAT FLEECE JACKET 4073 ATF Art no 109430			
3. MOF+ATS	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+	FLAMESTAT SHIRT 7074 ATS Art no 109425	+		Open arc result EN 61482-1-1 EBT 23,7cal/cm² HAF 91% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 1
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640		FLAMESTAT HIGH VIS SHIRT CL 3 7050 ATS Art no 124178			
			FLAMESTAT HIGH VIS SHIRT CL 1 7051 ATS Art no 124309			
			FLAMESTAT SHIRT 7200 ATSS Art no 114095			
4. MOF+TFLH+ATHS	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+	FLAMESTAT LONG SLEEVE T-SHIRT 7072 TFLH Art no 111842	+	FLAMESTAT HIGH VIS JACKET CL 3 4175 ATHS Art no 119922	Open arc result EN 61482-1-1 ATPV 41,2 cal/cm² HAF 94,1% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640		FLAMESTAT LONG SLEEVE T-SHIRT CL 3 7077 TFLH Art no 125041		FLAMESTAT HIGH VIS JACKET CL 2 4176 ATHS Art no 120929	
					FLAMESTAT JACKET 4174 ATHS Art no 119921	
					FLAMESTAT HIGH VIS JACKET WOMAN CL 3 4275 ATHS Art no 122195	
5. MOF+MFR+ATHS	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+	FLAMESTAT FLEECE JACKET 7044 MFR Art no 121649	+	FLAMESTAT HIGH VIS WINTER JACKET CL 3 4185 ATHS Art no 119923	Open arc result EN 61482-1-1 EBT 66,8 cal/cm² HAF 93,9% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640					
	FLAMESTAT LONG JOHNS 7027 MOF Art no 121641		FLAMESTAT FLEECE LONG JOHNS 7045 MFR Art no 121650		FLAMESTAT HIGH VIS WINTER TROUSERS CL 2 2085 ATHS Art no 109424	
6. MOF+ATS+ATHR	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+	FLAMESTAT SHIRT 7074 ATS Art no 109425	+	FLAMESTAT HIGH VIS WINTER PARKA CL 3 4086 ATHR Art no 109423	Open arc result EN 61482-1-1 ATPV 67,3cal/cm² HAF 95,4% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640		FLAMESTAT HIGH VIS SHIRT CL 3 7050 ATS Art no 124178			
			FLAMESTAT HIGH VIS SHIRT CL 1 7051 ATS Art no 124309			
			FLAMESTAT SHIRT 7200 ATSS Art no 114095			
7. TFLH+ATHS			FLAMESTAT LONG SLEEVE T-SHIRT 7072 TFLH Art no 111842	+	FLAMESTAT HIGH VIS JACKET CL 3 4175 ATHS Art no 119922	Open arc result EN 61482-1-1 EBT 26 cal/cm² HAF 91,5% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
			FLAMESTAT LONG SLEEVE T-SHIRT CL 3 7077 TFLH Art no 125041		FLAMESTAT HIGH VIS JACKET CL 2 4176 ATHS Art no 120929	
					FLAMESTAT JACKET 4174 ATHS Art no 119921	
					FLAMESTAT HIGH VIS JACKET WOMAN CL 3 4275 ATHS Art no 122195	
8. MOF + SFLH	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+	FLAMESTAT HIGH VIS SWEATSHIRT CL 3 7076 SFLH Art no 109428			Open arc result EN 61482-1-1 EBT 36 cal/cm² HAF 92,6% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640					
9. MOF + SFLA + ATHS	FLAMESTAT LONG SLEEVE T-SHIRT 7026 MOF Art no 121639	+	FLAMESTAT SWEATSHIRT 984 SFLA Art no 100581	+	FLAMESTAT HIGH VIS JACKET CL 3 4175 ATHS Art no 119922	Open arc result EN 61482-1-1 EBT 50,3 cal/cm² HAF 94,8% Box test approved: <input checked="" type="checkbox"/> EN 61482-1-2 CLASS 2
	FLAMESTAT HALF ZIP 7029 MOF Art no 121640				FLAMESTAT HIGH VIS JACKET CL 2 4176 ATHS Art no 120929	
					FLAMESTAT JACKET 4176 ATHS Art no 119921	
					FLAMESTAT HIGH VIS JACKET WOMAN CL 3 4275 ATHS Art no 122195	

NORMS, CERTIFICATIONS AND FACTS



EN ISO 11612:2015

Clothing to protect against heat and flame.

Two-piece protective clothing must be worn together to provide the specified level of protection. The CE-label inside the garment states the required garment-assembly. The CE-label inside the garment states to which code letters the garment are certified. The higher level, the better. The following code letters are describing the performance of the garments.

A: Limited flame spread

A1 - Surface ignition

A2 - Edge ignition

B: Protection against convective heat

B1 – B3

Convective heat is the heat that passes through the garment when in contact with flame. If there is an outer fabric that does not burn, injury may nevertheless occur due to the heat that forms when the fabric – and, indirectly, the body – comes into contact with the flame.

C: Protection against radiant heat

C1 – C4

Low radiant heat over a long period can result in a risk of injury.

D: Protection against molten aluminum splash

D1 – D3

E: Protection against molten iron splash

E1 – E3

Even if the fabric does not start to burn or decay in contact with the molten metal, you can still get burns. The test indicates how many molten metal splashes the fabric can withstand before protection is compromised.

F: Protection against contact heat

F1 – F3

Contact heat over a long period can result in risk of injury.



EN ISO 11611:2015

Protective clothing for use in welding and allied processes. This standard specifies two classes with specific performance requirements; Class 1 being the lower level and Class 2 the higher level.

Please see the table on page 61 to choose the right class for your welding technique. In electric arc-welding operations there is a risk of exposure of skin to Ultraviolet (UV) radiation. During use the fabric of the clothing will degrade. Examine the garments regularly to prevent exposure to UV radiation. If user experience sunburn-like symptoms, UVB is penetrating. If garment is found to be penetrated by UV radiation, it should be repaired (if practicable) or replaced and the use of additional, more resistant protective layers should be considered in future. Two-piece protective clothing must be worn together to provide the specified level of protection. The CE-label inside the garment states the required garment-assembly. Using additional partial protective garments, the basic garment shall meet at least Class 1. Use of welding apron which covers the front body at least from side seam to side seam is recommended. Additional partial body protection may be required, e.g. for welding overhead.



EN 1149-5:2008

Certified and approved garments that protect against electrostatic discharge Suitable for work where there is a risk of explosion.

The person wearing electrostatic dissipative clothing shall be properly earthed. The resistance between the person and the earth shall be less than $10^8 \Omega$, e.g. by wearing adequate footwear. Electrostatic dissipative protective clothing shall not be opened or removed whilst in presence of flammable or explosive atmospheres or while handling flammable or explosive substances. The garment shall permanently cover all non-compliant material during normal use, including bending and movements.

ATEX ENVIRONMENT

People working in an ATEX environment often wear flame retardant clothing. In this environment it is important that the garments do not charge with static electricity, which can cause sparks. To make garments antistatic, we add antistatic fibres to the fabric. To ensure that the design is right and suitable for use in an ATEX environment, the garments are certified according to EN 1149-5 together (at least) with EN ISO 11612. The garments are metal-free to offer higher security.



EN ISO 14116:2015

Protective clothing – Protection against flame – Limited flame spread material, material assemblies and clothing.

EN ISO 14116 has three Index, of which Index 3 is highest. If single layer garment contains index 1 materials, those have to be worn over index 2 or 3 garments, and may not come into contact with the skin. The standard is mostly used for approval of lining and trims for use in EN ISO 11612-garments. Can also be used for garments that can not be EN ISO 11612 certified.



EN 13034:2005, TYPE PB* [6]

Protective clothing against liquid chemicals offering limited protective performance against liquid chemicals.

Important: The standard describes clothing that has been tested for repellency to chemical splashes, not resistance to permeation of chemicals! The clothing gives protection against specific named chemicals.

- Sulphuric acid, H_2SO_4 , 30%
- Sodium hydroxide, NaOH, 10%
- O-Xylene, undiluted
- Butan-1-ol, undiluted

* PB = partial body protection

Please note: Adequate treatment must be added to the washing process minimum for every 5th washing cycle.



EN 343:2003+A1:2007

Certified and approved garments provide protection against rain and inclement weather.

Requirements and test methods for fabrics and seams of protective clothing against the influence of precipitation (rain, falling snow), fog and ground humidity. Resistance to water penetration and water vapour resistance are measured.

x = Resistance to water penetration (1–3)

y = Water vapour resistance (1–3)



EN 342:2004

Certified and approved garments provide protection against cold weather, i.e. thermal insulation properties and air permeability. A cold climate is characterised by a combination of moisture and a temperature below -5°. EN 342 indicates the value of the resulting effective thermal insulation for a wearer. It indicates the lowest temperature at which the body can maintain thermal neutral conditions indefinitely (8 hours) for light and medium duty tasks. It also indicates the lowest temperature at which body cooling is sustained at an acceptable level for 1 hour, while the wearer is performing light and medium duty tasks.

a The garment's thermal insulation properties

b The thermal insulation standing still (optional)

c Air permeability (1–3)

d Resistance to water penetration (optional)

REACH THE HIGHEST SAFETY CLASS EN ISO 20471 BY COMBINING YOUR GARMENTS



EN ISO 20471:2013

Certified and approved garments for protection when the user needs visually to signal his or her presence to vehicles in daylight, at night or in poor weather conditions. High visibility clothing has a fluorescent surface and retroreflective material that meet certification requirements in three different classes. Class 3 is the highest safety class. The performance class can be obtained using a single garment or a clothing assemble, e.g. jacket and trousers. This will be stated on CE-label. A class 3 garment shall cover the torso and shall have either sleeves with retroreflective bands or full length trouser legs with retroreflective bands.

MINIMUM AREA IN CM² TO OBTAIN APPROVAL ACCORDING TO EN ISO 20471

MATERIAL	CLASS 3	CLASS 2	CLASS 1
Fluorescent	0.8	0.5	0.14
Reflective	0.2	0.13	0.1

ART.NO	FLUORESCENT AREA/M²	REFLECTIVE AREA/M²	EN 20471 CLASSIFICATION	MAX AREA CM² FOR TRANSFER	MAX AREA CM² FOR EMBROIDERY
100379	0,8	0,2	3	*)	40 cm²
110706	0,69	0,13	2	435 cm²	40 cm²
101046	0,43 C44	0,13 C44	1	435 cm²	40 cm²
	0,5 ≥ C46	0,13 ≥ C46	2	*)	40 cm²
101050	0,76	0,2	2	435 cm²	40 cm²
108081	0,71 A	0,2 A	2	435 cm²	40 cm²
	0,8 I	0,21 I	3	*)	*)
	0,84 K	0,21 K	3	400 cm²	40 cm²
	0,92 F	0,2 F	3	435 cm²	40 cm²
108082	0,8	0,25	3	*)	*)
108084	0,9	0,31	3	435 cm²	40 cm²
108085	0,43 A	0,13 A	1	435	40 cm²
	0,5 D	0,13 D	2	*)	*)
108652	0,62	0,14	2	435 cm²	40 cm²
108653	0,44 ≤ C48	0,13 ≤ C48	1	435 cm²	40 cm²
	0,5 ≥ C50	0,13 ≥ C50	2	*)	*)
108654	0,97	0,29	3	435 cm²	40 cm²
108655	0,24	0,11	1	435 cm²	40 cm²
109417	0,14	0,1	1	435 cm²	40 cm²
109419	0,69	0,15	2	435 cm²	40 cm²
109420	0,69	0,13	2	435 cm²	40 cm²
109423	0,81	0,2	3	100 cm²	40 cm²
109424	0,65	0,14	2	435 cm²	40 cm²
109428	0,69 A	0,19 A	2	435 cm²	40 cm²
	0,75 I	0,21 I	2	435 cm²	40 cm²
	0,85 E	0,22 E	3	435 cm²	40 cm²
110642	0,53	0,13	2	300 cm²	40 cm²
111619	0,14	0,1	1	*)	*)
119922	0,77 A	0,18 A	2	435 cm²	40 cm²
	0,86 D	0,2 D	3	435 cm²	40 cm²
122195	0,74 C	0,17 C	2	435 cm²	40 cm²
	0,84 F	0,21 F	3	400 cm²	40 cm²
122196	0,54	0,13	2	400 cm²	40 cm²
122197	0,21	0,1	1	435 cm²	40 cm²
119923	0,62 A	0,19 A	2	435 cm²	40 cm²
	0,87 D	0,2 D	3	435 cm²	40 cm²
120929	0,43 B	0,18 B	1	435 cm²	40 cm²
120929	0,55 E	0,2 E	2	435 cm²	40 cm²
121355	0,14	0,1	1	*)	*)
122233	0,8 A	0,19 A	2	435 cm²	40 cm²
	0,86 D	0,2 D	3	435 cm²	40 cm²
124178	0,86	0,2	3	435 cm²	40 cm²
124309	0,42	0,2	1	435 cm²	40 cm²
125041	0,67 A	0,19 A	2	250 cm²	40 cm²
	0,74 I	0,20 I	2	250 cm²	40 cm²
	0,80 E	0,21 E	3	*)	*)

*) Logo placement only possible on contrast color area.

A SIZE XS D SIZE S-4XL G SIZE 2XS J SIZE S-M
B SIZE XS-S E SIZE M-4XL H SIZE XS-4XL K SIZE M
C SIZE XS-M F SIZE L-4XL I SIZE S

		TROUSERS	FLAMESTAT				FLAMTECH®			
			109417	109419	109420	109424	110706	121355	101056	108085
FLAMESTAT	100379	GORE-TEX® Jacket 4089 GXH								
	109423	Parka 4086 ATHR	3	3	3	3	3			
	109428	Sweatshirt 7076 SFLH	3	3	3					
	110642	Waistcoat 5075 ATHS		3	3					
	119922	Jacket 4175 ATHS	3	3	3		3			
	119923	Winter jacket 4185 ATHS	3	3	3	3	3			
	122233	Fleecejacket 4063 ATF	3	3	3	3	3			
	120929	Jacket 4176 ATHS		3	3					
	124178	Shirt 7050 ATS	3	3			3			
	124309	Shirt 7051 ATS		3						
FLAMTECH®	101038	Rain Jacket 4845 RSHF							3	
	108081	Winter Jacket 4852 FWA							3	
	108082	Parka 4853 FWA							3	
	101050	Jacket 4846 FBPA							3	3

MATERIAL

Flame retardant fabrics are used to make garments harder to ignite and to impede flame spread. If a fabric is described as flame retardant, this does not mean, however, that the fabric is not flammable. The purpose of flame retardancy is to halt the combustion process in various ways. Most synthetic fibres ignite easily and then melt. Cotton, on the other hand, is harder to ignite but burns for longer and more fully. In principle, wool is not flammable, in tests, it can withstand contact with a glowing cigarette without starting to burn. Due to the properties of these different materials, we have developed different collections of garments to meet different purposes. We have developed collections in inherently flame retardant fabrics and in flame retardant treated fabrics. We also make inherently flame retardant underwear.

LOI VALUE

Limited Oxygen Index (LOI) measures the lowest oxygen content at which the material burns by itself after being ignited. Air contains approximately 21% oxygen. Easily flammable materials have a LOI value of about 20% or lower. One example is cotton, which has an LOI of 16 – 18%. The lowest limit for fabrics that are difficult to ignite is about 25%, which is roughly the case for wool.

Wool	25%
Flame retardant treated cotton	28%
Flame retardant treated wool	30–32%
Meta-aramid	30%
Modacrylic	33%
Modacrylic/cotton mix	35%

INHERENT FLAME RETARDANT FABRICS – MODACRYLIC OR ARAMIDES

The unique molecular structure of the yarn fibres makes them inherently flame retardant without chemical treatment. The fibre contains antimony salts for highest FR performance which stops the spread and continuation of burning. Inherently flame retardant fibres minimise burn injuries by creating a protective barrier between the heat source and the wearer's skin. And as the flame protection is not applied as a coating but is rather an integral part of the fibre structure, it cannot be washed or worn away. The protective properties are permanent and retained throughout the lifetime of the garment. No further treatments or re-treatments are required. Inherently flame retardant fabrics are suitable for either domestic or industrial laundering.

MODACRYLIC – PROTEX AND PROTAL FIBRE MIXES

Our Flamestat collection is made from a light and flexible high-performance inherently flame retardant fabric. This fabric is made from a blend of modified acrylic fibres, long fibre cotton, strong polyamide fibres and antistatic fibres. This unique mix is both soft and comfortable against the skin and at the same time strong and durable for workwear, providing effective, long-term protection. Modacrylic fabrics shed metal electrode splashes extremely effectively. This prevents heat transmission burns since no hot metal pieces remain on the fabric in event of an arc accident.

The fabric is cotton-like in appearance and is inherently flame retardant. It provides excellent heat insulation and prevents second-degree burns. It is also quick-drying and has excellent moisture management properties. When flames come into contact with the fabric, the modacrylic fibres release a small amount of protective gas, displacing the oxygen and extinguishing the flame. The fabric does not melt or drip onto the skin as it creates a strong protective char barrier. Superior quality, comfort, strength and protection in one great package. Our Flamestat collection is tested and approved for industrial laundry according to ISO 15797 and is also OEKO-TEX® certified.

The difference between our GORE-TEX® (GXH) fabric and other inherently flame retardant fabrics is that GXH has an anti-static membrane, while the rest have antistatic fibres in the weave. GORE-TEX® fabrics is also wind and waterproof as well as breathable.

FLAME RETARDANT TREATED FABRICS – PROBAN®

These include cotton and polyester fabrics treated with flame retardant chemicals that inhibit or suppress the combustion process. Flame retardant treated fabrics are treated with a flame retardant chemical that forms a bond at the molecular level with the cellulose in the cotton fibres. Our Flametech®-collection is made from flame retardant treated fabrics. When flame comes into contact with the fabric, the fabric releases a small amount of gas, displacing the oxygen and extinguishing the flame. The fabric does not melt or drip onto the skin, as it creates a protective char barrier. These fabrics are durable provided that they are washed in accordance with our instructions. Flame retardant treated fabrics can be domestically or industrially laundered.

UNDERWEAR

Our underwear sets in the materials MOF and MFR, are made from a blend of modacrylic, cotton and elastane. Modacrylic fibres have an inherent anti-flame protection. Combined with cotton, it provides a soft, strong material with good thermal insulation properties. The underwear from Devold® is made from a blend of Merino wool and viscose FR®. Merino wool is a soft wool that is naturally anti-flame. Viscose FR® is a viscose fibre with inherent permanent anti-flame. The combination is a material that both keeps you warm and is very comfortable to wear. All our materials are preshrunk and can be machine washed.

LEATHER PRODUCTS

We also have welding aprons in split leather, which can naturally withstand welding sparks and can prolong the lifetime of your welding clothes.

OCCUPATIONS

ELECTRICIANS

This group needs garments certified and approved according to EN ISO 11612 and electric arc tested according to IEC 61482-2. Garments that comply with EN ISO 11612 protect the user from contact with heat and flames. Protective clothing tested according to IEC 61482-2 protects against the thermal hazards that may occur in electric arc accidents. The test does not assess the effects of other factors, such as noise, light, increased pressure, hot oil, electric shocks, the consequences of physical or mental shocks, or toxic substances. An ATPV/EBT value of at least 8 cal/cm² is the general guideline.

If the risk is higher, we recommend that the end user wears several layers of protective clothing, i.e. flame retardant underwear under the electric arc certified garments or garments in a fabric with a higher arc-rating (higher ATPV or EBT). In both cases, the garments solution should be worn with other safety equipment i.e. safety helmet with protective visor, protective gloves and protective footwear (boots) to ensure the right level of protection. When underwear is used, it should preferably be made of flame-retardant materials. Garments made of synthetic fibres such as polyamide, polyester and acrylic will melt in response to the heat that occurs during arc exposure and cause serious skin damage. Even if the outer garments are certified to IEC 61482-2 synthetic underwear must not be used. The outer layer of an electrician's protective clothing must therefore be made from arc-tested fabrics (IEC 61482-2), and the remaining layers must pass a flame test (EN ISO 11612 or EN ISO 14116 Index 3).

WELDERS

This group needs garments that are certified and approved according to EN ISO 11611. Garments that comply with this standard protect the wearer during welding or similar work. This standard demands greater protection against welding sparks. Garments suitable for welding have fewer pockets and functional details than other garments. Welding clothes are often used in conjunction with other PPE, e.g. welding apron, helmet and gloves.

OIL INDUSTRIAL WORKERS

As they often work in an ATEX environment, this group (refinery workers, offshore workers, tanker drivers) must wear garments certified and approved in accordance with EN ISO 11612 and EN1149-5. Garments approved in accordance with EN ISO 11612 protect the user in the event of contact with heat and flames. Garments that comply with EN 1149-5 protect the user against sudden discharges of electrostatic energy and are worn where there is a risk that static sparks may ignite flammable substances, such as gas and oil. The design specification for these garments stipulates that conductive materials, such as metal zips and buttons, must be concealed. If the garments are metal-free they offer higher security. In addition to certification according to EN ISO 11612 and EN 1149-5, standards EN 343 and EN ISO 20471 are also important for this group.

RAIL WORKERS

This group needs garments certified and approved in accordance with EN ISO 11612 and EN 471/EN ISO 20471. Garments approved in accordance with EN ISO 11612 protect the user in the event of contact with heat and flames. Garments approved in accordance with EN 471/EN ISO 20471 make the wearer visible to their surroundings in daylight, at night and in poor weather conditions. Some workers in this group also need garments certified in accordance with EN ISO 11611. Garments under this standard protect the user during welding or similar work. The protective clothing is intended to protect the wearer from small drops of molten metal, brief contact with flames and UV radiation. This standard provides greater protection from welding sparks, which is why these garments have fewer pockets and functional details than other garments. Please refer to the guide to selecting welders' clothing under Welders.


GUIDANCE FOR THE SELECTION OF THE CLASS OF WELDERS' CLOTHING



	SELECTION CRITERIA RELATING TO THE PROCESS:	SELECTION CRITERIA RELATING TO THE ENVIRONMENTAL CONDITIONS:
CLASS 1	Manual welding techniques, light formation of spatters and drops, e.g.: • Gas welding • Tig welding • Mig welding • Micro plasma welding • Brazing • Spot welding • MMA welding (with rutile-covered electrode)	Operation of machines, e.g. of: • Oxygen cutting machines • Plasma cutting machines • Resistance welding machines • Machines for thermal spraying • Bench welding
	Manual welding techniques, heavy formation of spatters and drops, e.g.:	Operation of machines, e.g. of:
CLASS 2	• MMA welding (with basic or cellulosecovered electrode) • Mag welding (with CO ₂ or mixed gases) • MIG welding (with high current) • Self-shielded flux cored arc welding (FCAW) • Plasma cutting • Gouging • Oxygen cutting • Thermal spraying	• In confined spaces • At overhead welding/cutting or in comparable constrained positions

EXAMPLE OF HOW ALL OUR FLAME PROTECTIVE CLOTHING SYSTEM ARE CE-MARKED


CE 0403


Art#: 109417


 READ INSTRUCTIONBOOK!


 # +  # =


109417 109416 109421



 EN ISO 11612:2008 A1 B1 C1 F1

 EN 1149-5:2008



 IEC 61482-2 EBT50 = 10,5 cal/cm² and Class 1

 EN 13034:2005 Type PB [6]

 READ INSTRUCTIONBOOK!


 # =  #

109417 EN ISO 20471:2013

 # +  #

109417 109421 109422 109423

Sizes ≥ C44:

=  #

EN ISO 20471:2013

USEFUL INFORMATION

GENERAL

- Garments that are dirty, wet or sweaty provide less flame protection.
- After a flame retardant garment is exposed to flames, it is ruined. Even if the damage is not visible, the fabric is weakened and holes will form when it is washed.
- When repairing protective clothing, use the same fabric, thread and trims as the garment is made of. Alternatively, use fabric, thread and trims with the same or higher certification requirements as the garments.
- Transfers and embroideries which are tested against flame spread may be applied. For high-visibility garments (certified according to EN ISO 20471), be aware of the limitation of size on embroidery and transfers to maintain the level of certification. See table on page 59 for maximum allowed size of embroidery and transfer.
- The reflective tape on our flame retardant garments is flame retardant and approved according to EN ISO 14116, EN 469 and EN 471/EN ISO 20471.
- None of our products contain PBB (polybrominated biphenyl) or PBDE (polybrominated diphenyl ethers).
- Where flame retardant clothing is concerned, different occupational groups have different needs.

LAYERING

- Flame retardancy prevents flames from spreading. However, heat can spread through the garment causing the skin to burn. If you wear flame retardant garments, they will protect against heat for a certain period. The period of time during which you are protected is increased if you also wear flame retardant underwear. The same applied to electric arc certified garments – wearing flame retardant underwear or several layers will increase protection, i.e. increase the arc rating and the amount of energy that the garment system can withstand.
- The garments should be worn buttoned. Protection is impaired if the garment is worn in combination with non-flame retardant garments.
- Before putting on your garment, check that it is not damaged. As a wearer, you should also make sure you know how to take the garment off quickly in the event of an accident.
- We recommend that welders use a leather welding apron to protect other welding garments from sparks.

WASHING INSTRUCTIONS

- We recommend industrial laundry for flame retardant garments to ensure that full protection is maintained. If there is no industrial laundry available, flame retardant garments must always be washed according to the washing instructions on the garment.
- Flame retardant garments must not be washed with soap detergents or fabric softeners and must not be chlorine bleached. Only synthetic detergents may be used to retain the protective properties.
- Garments with reflective tape should be washed inside out.

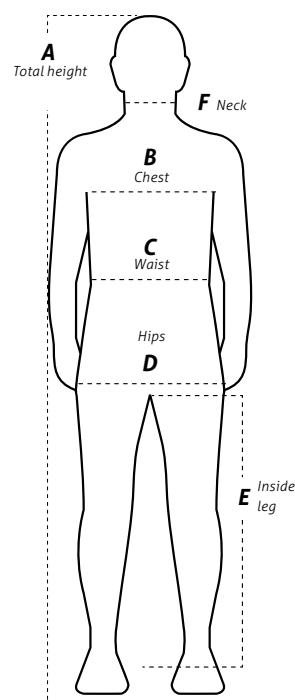
SIZE GUIDE

Starting from your own body size, compare to the tables to find the correct size. Choose the table matching your height (A).

When buying trousers and coveralls, measure A, C, D, E and for jackets, measure B (sizes XS-4XL).

PLEASE NOTE!

All measurements given in the tables are body size, except the inside leg, which is equivalent to the garment's size.



PLEASE
NOTE! USE
YOUR BODY
MEASUREMENTS

JACKETS, TROUSERS AND COVERALLS. TOTAL HEIGHT 176-184 CM. THIS TABLE SHOWS THE SIZE GROUP REGULAR FOR COVERALLS.

MEN SIZES		C40	C42	C44	C46	C48	C50	C52	C54	C56	C58	C60	C62	C64	C66					
			XS / REGULAR XS		S / REGULAR S		M / REGULAR M		L / REGULAR L		XL / REGULAR XL		2XL / REGULAR 2XL		3XL / REGULAR 3XL		4XL / REGULAR 4XL		5XL / REGULAR 5XL	
Figure C Normal waist	B Chest cm	80	84	88	92	96	100	104	108	112	116	120	124	128	132	136	140	144	148	152
	C Waist cm	68	72	76	80	84	88	92	97	102	108	114	120	126	132	138	144	150	156	162
A Total height 176 – 184 cm	D Hips cm	88	91	94	98	102	106	110	114	118	122	126	130	134	138	142	146	150	154	158
	E Inside leg cm	80	80	80	80	82	82	82	82	84	84	84	84	84	84	84	84	84	84	84

TROUSERS. TOTAL HEIGHT 184-192 CM.

MENSIZES		C144	C146	C148	C150	C152	C154	C156	C158	C160	C162	C164	C166	C168
Figure C Normal waist	B Chest cm	88	92	96	100	104	108	112	116	120	124	128	132	136
	C Waist cm	76	80	84	88	92	97	102	108	114	120	126	132	138
A Total height 184 – 192 cm	D Hips cm	94	98	102	106	110	114	118	122	126	130	134	138	142
	E Inside leg cm	85	85	87	87	87	87	89	89	89	89	89	89	89

TROUSERS. TOTAL HEIGHT 168-176 CM.

MENSIZES		D84	D88	D92	D96	D100	D104	D108	D112	D116	D120	D124	D128	D132	D136
Figure D Large waist	B Chest cm	84	88	92	96	100	104	108	112	116	120	124	128	132	136
	C Waist cm	78	82	86	90	94	98	103	108	114	120	126	132	138	144
A Total height 168 – 176 cm	D Hips cm	93	96	100	104	108	112	116	120	124	128	132	136	140	144
	E Inside leg cm	76	76	76	78	78	78	80	80	80	80	80	80	80	80

TABLES FOR WOMEN'S GARMENTS ON PAGE 32.

WOMEN SIZES			C34	C36	C38	C40	C42	C44	C46	C48	C50	C52			
		XS	S		M		L		XL		2XL		3XL		
Figure C Normal hips	B Chest cm	76	80	84	88	92	96	100	104	110	116	122	128	134	
	C Waist cm	63	66	69	72	76	80	84	88	93	99	105	111	117	
A Total height 164 – 172 cm	D Hips cm	87	90	93	96	99	102	106	110	115	120	125	130	135	
	E Inside leg cm	80	80	80	80	80	80	80	80	80	80	80	80	80	

SIZE TABLE ONLY FOR FLAMTECH® TROUSERS ON PAGES 47-48.

TROUSERS	SIZES	C44	C46	C48	C50	C52	C54	C56	C58	C60	C62	C64	C146	C148	C150	C152	C154	C156
	C Waist cm	76	80	84	88	92	96	100	104	108	112	116	80	84	88	92	96	100
	E Inside leg cm	80	80	82	82	82	82	84	84	84	84	84	85	87	87	87	87	89

MENS SHIRTS SIZES	XS	S	M	L	XL	2XL	3XL
F Neck measurement in cm	35 – 36	37 – 38	39 – 40	41 – 42	43 – 44	45 – 46	47 – 48

**FOR ANY
MISSION
IN ANY
CONDITION
LET'S GET
TO WORK**