

# FLAME PROTECTION 2023



**BLÅKLÄDER**<sup>®</sup>  
WORKWEAR



# PROTECTIVE GARMENTS FOR HIGH-RISK WORK

This collection provides maximum protection for welders, electricians, industrial workers and other occupational groups exposed to electrical hazards, fire and heat risk, liquid chemicals and harsh outdoor environments. All of the garments are certified to European standards and conform to the same high quality and performance requirements as other workwear collections from Blåkläder.

The featured garments were designed in partnership with some of our leading customers. In consultation with these industry partners, we addressed preferences and requirements for functional features such as pockets, material and fit, but also for work safety.

# FEAR NO ELEMENT

MULTINORM

PAGE 30



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**NEW!**

FLAME  
RESISTANT  
FOR WOMEN

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## DRESS IN MULTIPLE LAYERS FOR INCREASED PROTECTION

Materials and garments tested for IEC 61482-2 have an evaluated protection against the extreme heat that develops in an arc accident. The standard sets the limit of protection to avoid the second degree's burn and you use the Stoll curve\* as the basis for the evaluation.

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# BECAUSE TOMORROW **MATTERS**

Sustainability has always been part of our story. Since Blåkläder began in 1959, we've been making sustainable workwear. The awareness of sustainability issues has increased over time and it now permeates every aspect of our global organisation.

We believe in sustainability. Because tomorrow matters.



## A SUSTAINABLE HISTORY

**With our roots firmly planted in the heartland of the Swedish textile industry, Blåkläder has a long and proud history of sustainable clothing production for both fashion and industry. After more than 60 years in the business, our family-run company has gained a deep understanding of how to produce workwear.**

We develop, produce and distribute workwear, gloves and shoes for tradesmen placing high demands on sustainability, functionality, quality and design. At the same time, we stay true to our brand by respecting its heritage.

Our suppliers are essential to our success and we see close, long-term relationships with material producers and sewing

suppliers as the foundation of our business. Our products are distributed through dealers and direct sales to large organisations on the international market. Our aim is to be the leading supplier in all relevant markets.

Our main focus is in Europe, but in recent years, Blåkläder has introduced and expanded our business in the American, Canadian, and Japanese markets.

AB Blåkläder is the Blåkläder Group's operational parent company and is located in Svenljunga, Sweden. AB Blåkläder has several fully owned subsidiaries located in Norway, Finland, Germany, Poland, Austria, Netherlands, Belgium (branch), Estonia, Czech Republic, Ireland, Denmark, France, UK, Spain, Italy, USA and Canada.

# BLÅKLÄDERS COLLECTION

# MULTINORM & FLAME PROTECTION



## INHERENT LIGHTWEIGHT

Quality: 1512, 260g/m<sup>2</sup>

A soft, supple collection with inherent flame protection. Typical work areas: service and maintenance, industry, installation and energy sector (wind, solar and water energy).

PAGE 12

## MULTINORM LIGHTWEIGHT

Quality: 1532, 250g/m<sup>2</sup>

Wind- and waterproof shell garments with good breathability. Typical work areas: service and maintenance, energy sector (wind, solar and water energy).

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## MULTINORM LIGHTWEIGHT WOMENS

Quality: 1512, 260g/m<sup>2</sup>

A soft, supple collection with inherent flame protection. Typical work areas: service and maintenance, industry, installation and energy sector (wind, solar and water energy).

PAGE 16

## INHERENT STEEL

Quality: 1519, 320g/m<sup>2</sup>

A thicker inherent quality with good molten metal properties (iron and steel). Typical work areas: steelworks and foundries.

PAGE 20

## MULTINORM INHERENT

Quality: 1513, 310g/m<sup>2</sup>

A soft, supple collection with inherent flame protection. Typical work areas: service and maintenance, industry, installation and energy sector (wind, solar and water energy).

PAGE 22



## MULTINORM HEAVYWEIGHT

Quality: 1514, 350g/m<sup>2</sup>

A thicker quality with a high percentage of cotton, with treated flame protection. Typical work areas: service and maintenance, industry, installation and energy sector (wind, solar and water energy).

PAGE 24

## MULTINORM WINTER

Quality: 1534, 290g/m<sup>2</sup>

A wind- and waterproof winter collection with surface fabric based on our popular 1512 quality. Typical work areas: service and maintenance, energy sector (wind, solar and water energy).

PAGE 30

## WELDING CLASS 2

Quality: 1501, 450g/m<sup>2</sup>

A thicker satin quality with a high percentage of cotton, with treated flame protection. Typical work areas: welding and mechanical workshops.

PAGE 32

## FLAME COMFORT

Quality: 1516, 350g/m<sup>2</sup>

A thicker quality with a high percentage of cotton, with treated flame protection. Typical work areas: mechanical workshops, welding and energy sector (wind, solar and water energy).

PAGE 34

## MULTINORM LIGHTWEIGHT

Quality: 2022, 390g/m<sup>2</sup>

Rainwear with antistatic function and electric arc flash protection. A thicker quality for tougher conditions.

PAGE 38



# FLAME PROTECTION FROM THE INSIDE OUT

In many working environments, our end customers are exposed to risks involving heat and flames daily. If an accident happens, the consequences can be extremely serious. Protective clothing can never fully eliminate the risks or offer 100% protection, but the choice of clothing can mean the difference between a mild and a serious injury.

It is therefore vital that a workplace risk analysis has been carried out, so that the choice of personal protective equipment (PPE) is based on the right parameters.

Even clothing that appears to have nothing to do with flame protection can be hugely important in minimising the consequences if an accident should happen. One example is underwear or other garments worn underneath the flame resistant clothing.

If someone is wearing synthetic garments, for instance, they can fuse to the skin in an accident and make an injury far worse. Underwear with metal in, such as an underwire bra, can cause severe injuries in an electric arc flash.

Blåkläder offer clothing that protects you from the inside out – from the layer closest to the body, to the outerwear that shields you from the elements.





## STeP BY STeP with OEKO-TEX

Blåkläder's flame resistant range has been made following the same sustainability concept as our other collections. The clothes are made at our own factories in Myanmar and Sri Lanka in a health-focused working environment. The factories also have environmental aspects covered, with climate-smart operation and solar energy from roof panels.

All four sewing factories in Sri Lanka are STeP by OEKO-TEX certified – assurance that our production is sustainable from a quality, environmental and social perspective. We have close, long-term relationships with our suppliers of materials and components, and know every partner in the chain well. Each individual part of Blåkläder's garments has been carefully chosen by us, and we know how, where and under what conditions each component is made. Our most important material suppliers are also STeP by OEKO-TEX certified, which means textile manufacturing is generally sustainable.

At Blåkläder, we believe that a close, transparent supply chain is the path to fundamental sustainability.

OEKO  
TEX®

STeP

# FLAME RESISTANT TEXTILES

Textiles that are non-flammable and to a high degree self-extinguishing in normal oxygen content environments (21% oxygen) are called flame resistant (abbreviated FR). In most cases this does not mean that the material is completely unaffected by heat and flame, or that it cannot catch fire. In oxygen saturated environments, for instance, there is always a heightened risk of fire.

The flame protection could be a natural property of the fibre material, as in natural fibres like wool and asbestos, or synthetic fibres like para- and meta-aramid (such as Kevlar and Nomex) or modacrylic. These are generally referred to as 'inherent' flame resistant materials, which means that the flame protection is naturally built into the fibre.

There are also additives that give a textile fibre flame resistant properties, and this is referred to as 'treated flame protection'. Historically, there have been many more or less effective methods of treating textiles for flame protection, most of which were never permanent and also emitted environmentally hazardous substances.

However, those historical techniques have very little to do with the flame retardants used on textiles today. High-performance flame retardants are applied in strictly controlled processes and in limited quantities, to then become a permanent part of the textile material. Blåkläder primarily uses Proban treated cellulose (cotton) when it comes to treated flame protection.

When exposed to extreme heat, some of the heat energy is absorbed when the material in the textile becomes carbonised. This exposes the wearer to a lower heat level, which shows just how important carbonisation is in protective clothing. This is a highly relevant parameter, especially in garments designed to protect against thermal risks in the event of an electric arc flash accident.

Blåkläder primarily uses two kinds of flame resistant textiles: inherent flame protection in the form of modacrylic, and flame resistant materials with a high proportion of cellulose treated with Proban.

Flame protection, whether treated or inherent, cannot be washed out of a textile. As long as the textile is whole and has not been subjected to excessive wear and tear – i.e. has not lost too much weight due to fibre loss – the flame protection remains.

Although care and washing matter a lot to a garment's useful life, it is not the washing itself that poses a risk when it comes to flame resistance. Blåkläder has had a third party assess the flame resistant properties after as many as 150 industrial wash cycles, both on our inherent and treated FR materials. The conclusion was that the resistance to heat and flame remains unaffected by the number of wash cycles.

So the single greatest risk to flame protection in a garment is not the washing, but how the garment is used. A flame resistant garment that has undergone severe use and has holes in it, no longer offers full protection. It must either be repaired or discarded. Another reason that clothes lose their flame protection is that they are not clean. Flammable substances such as fat- and oil-based dirt can basically turn the garment into a candle wick – the dirt in the material can catch fire even though the garment is flame resistant. It is therefore extremely important that flame resistant garments are kept clean, and if they do get covered in flammable substances that can't be washed off, they must be discarded. If clothing that has been heavily soiled by e.g. grease and oil is worn in high-risk environments, it can put the wearer at serious risk, even though they think they are protected by their flame resistant clothing.



## PROBAN

Proban is a flame resistant treatment offered by Solvay. To use their product, companies need a licence and have to undergo comprehensive quality control of the textile manufacturing process. Material samples from each production are sent to Solvay for referencing and control.

Proban treatment basically involves the addition of phosphorus: Solvay's patented process adds polymer which is permanently bound to the core of the cellulose fibre. This cross-linked polymer is irreversible, so the process can never be reversed. It can, however, become damaged if the textile is exposed to chlorine-based bleaches. It is therefore very important that clothes with Proban treated textile are not regularly exposed to chlorine solutions.

All textiles in Blåkläder's range with Proban flame protection are produced in STeP by OEKO-TEX certified facilities. The textiles are also certified to STANDARD 100 by OEKO-TEX, class II. Altogether, this means that textile production takes place with a firm focus on quality control and in an environmentally and socially sustainable process, and that the clothes are safe to wear close to the skin.

### STRENGTHS:

- Good value flame protection
- Durable garments thanks to a high proportion of cotton
- Comfortable garments with a high proportion of cotton
- Quality inspected and controlled manufacturing process – validation of protective properties

### LIMITATIONS:

- Chlorine bleaches can damage the cross-linked polymer inside the cotton fibres – important to follow care instructions
- May feel warm and dense (relatively heavy textiles needed)

## MODACRYLIC

Modacrylic is a soft, supple synthetic fibre that is often used in blends with other fibre types to achieve certain properties in the final textile. Modacrylic itself is resistant to both acidic and alkaline solutions. The fibre is light, making it possible to make airy, comfortable textiles with comparatively high protective properties.

Like many other synthetic fibres, modacrylic has a tendency to get pills or lint on the surface after relatively limited use. This may give the impression that the garment is quickly wearing out, but as long as the material is whole the flame resistance remains.

The modacrylic fibre stiffens when heated to over 150 degrees Celsius, so it is essential to follow the care instructions to preserve the protective function and not wear the material out prematurely.

### STRENGTHS:

- Lightweight, supple garments
- High protective levels
- Good resistance to acidic and alkaline solutions

### LIMITATIONS:

- Higher price level
- Limited resistance to mechanical wear (it can dull the colour and create pills/lint/fuzz)
- Stiffens at high temperatures; important to follow care instructions



# INHERENT LIGHTWEIGHT

The material used in 1512 is an inherent fabric, meaning that the flame retardant is integral to the molecular structure of the fibre and can neither be worn nor washed away. This is what makes inherent flame-retardant garments durable, light-weight, comfortable and permanently protective.

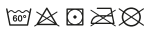
The fabric meets the standard for EN 1149-3, EN ISO 11611 class 1, A1+A2, EN ISO 11612 A1+A2, B1, C1, E2, F1, EN 61482-1-1 ATPV=11,9 cal/cm<sup>2</sup>, EN 61482-1-2 class 1, EN 13034, EN ISO 20471, HAF: 79,3%, LOI: 29,6%.

We recommend professional industrial laundering for extended garment life. The reflectors are designed to withstand heavy-duty use and industrial laundering. If the garment is not laundered professionally, follow the care instructions. Softener or detergent with bleach should not be used.

Quality 1512 is tested and approved after 50 industrial washes according to EN ISO 11612 (A1, B1, C1), EN 1149-3 and EN ISO 20471.



4969



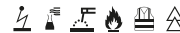
## 4089

### MULTINORM INHERENT JACKET

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-6XL

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** Shoulder sections in contrasting colour. External certification labels. Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. High collar with zipper. **POCKETS:** Chest pocket with zipper. Chest pockets with covered zipper. Front pockets with flap and push button. **FRONT CLOSURE:** Front closure with hidden push buttons in plastic. Robust hidden one-way plastic zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. Reflectors on shoulders. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. Certified according to EN ISO 20471, XS-S Class 2, M-> Class 3. Together with art. 1488, 1489, 1588, 1589 or 2889 obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9 cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



7189



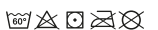
## 1588

### MULTINORM INHERENT TROUSERS

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
30R-48R, 32L-40L, 34S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, flap and pen pocket, extra pocket, telephone pocket and ID pocket. Angled front pockets. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 2. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9 cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



## 1589

### MULTINORM INHERENT TROUSERS

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
30R-48R, 32L-40L, 34S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced. Leg pocket with bellow, telephone pocket and pen pocket. Angled front pockets. Outer knee protection pocket. Reinforced, three-compartment nail pockets on front. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 2. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. EN ISO 11612 A1, A2, B1, C1, F1. IEC 61482-2, class 1. ATPV: 11,9 cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.





7188

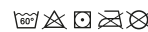
**1488**

## MULTINORM INHERENT TROUSERS

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
30R-48R, 32L-40L, 34S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Angled front pockets. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>. HAF: 79,3%. LOI: 29,6%..

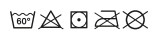
**1489**

## MULTINORM INHERENT TROUSERS

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
30R-48R, 32L-40L, 34S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced. Leg pocket with bellow, telephone pocket and pen pocket. Angled front pockets. Outer knee protection pocket. Reinforced, three-compartment nail pockets on front. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. EN ISO 11612 A1, A2, B1, C1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>. HAF: 79,3%. LOI: 29,6%..

**3089**

## MULTINORM WAISTCOAT INHERENT

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3300** Hi-vis yellow  
S-4XL

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Straps. D-ring. **POCKETS:** Loose-hanging chest pockets with safety straps, one with flap and metal push buttons, one open with pen pockets and tool tape. Front pockets with flap. Nail pockets - front and back. Reinforced, three-compartment nail pockets on front. **FRONT CLOSURE:** Front closure with hidden push buttons in plastic. Robust hidden one-way plastic zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN ISO 20471, Class 2. EN ISO 11612 A1, A2, B1, C1, F1. Arc rating: 11,9 cal/cm<sup>2</sup>. HAF: 79,3%. LOI: 29,6%. IEC 61482-2, class 1..

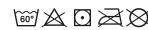
**2889**

## MULTINORM INHERENT BIB

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
32R-48R, 34S-47S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Hidden buttons. Adjustable waistline. Removable ID-pocket for flame retardant clothes. Adjustable braces with elastic. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with flap and pen pocket. Angled front pockets. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 2. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>. HAF: 79,3%. LOI: 29,6%..

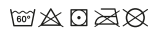
**2888**

## BIB TROUSERS MULTINORM INHERENT

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
32R-48R, 34S-47S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Adjustable waistline. Removable ID-pocket for flame retardant clothes. Adjustable braces with elastic. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with flap and pen pocket. Angled front pockets. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, APC 1. ATPV - 11,9 cal/cm<sup>2</sup>.

**6089**

## MULTINORM INHERENT OVERALLS

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
32R-48R, 34S-47S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** Shoulder sections in contrasting colour. External certification labels. Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. High collar with zipper. Adjustable waistline. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with zipper. Front pockets with flap and push button. Opening with flap for gripping underlying garment. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **FRONT CLOSURE:** Front closure with hidden push buttons in plastic. Robust hidden two-way plastic zipper. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 3. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>. HAF: 79,3%. LOI: 29,6%..



## FLAME RESISTANT & MULTI-NORM INHERENT STRETCH



7187



### 1787

#### TROUSERS MULTINORM INHERENT WITH STRETCH

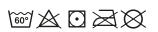
**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
30R-48R, 32S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. Stretch panel in crotch and backside. Pre-bent knees. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pocket. Leg pocket with bellow, flap and phone pocket. Inset pockets. Outer knee protection pocket. Reinforced ruler pocket with possibility of two placements of knife and one pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, APC 1. ATPV - 10,7 cal/cm<sup>2</sup>.



7191



### 1788

#### TROUSERS MULTINORM INHERENT WITH STRETCH

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
30R-48R, 32S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. Stretch panel in crotch and backside. Pre-bent knees. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pocket. Leg pocket with bellow, flap and phone pocket. Inset pockets. Outer knee protection pocket. Reinforced ruler pocket with possibility of two placements of knife and one pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 2. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, APC 1. ATPV - 10,7 cal/cm<sup>2</sup>.



### 1587

#### MULTINORM INHERENT TROUSERS WITH STRETCH

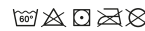
**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
30R-48R, 34S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. Stretch panel in crotch and backside. Pre-bent knees. **DETAILS:** External labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pocket. Leg pocket with bellow, flap and phone pocket. Inset pockets. Outer knee protection pocket. Reinforced, three-compartment nail pockets on front. Reinforced ruler pocket with possibility of two placements of knife and one pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 2. EN ISO 11612 A1, B1, C1, F1. Arc rating: 10,7 cal/cm<sup>2</sup> (regarding stretch fabric). IEC 61482-2, class 1.



7185



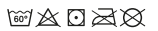
### 1487

#### MULTINORM INHERENT TROUSERS WITH STRETCH

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
30R-48R, 34S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. Stretch panel in crotch and backside. Pre-bent knees. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pocket. Leg pocket with bellow, flap and phone pocket. Reinforced, three-compartment nail pockets on front. Reinforced ruler pocket with possibility of two placements of knife and one pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, class 1. ATPV: 10,7 cal/cm<sup>2</sup>, HAF 72,5% (stretch material).



### 1486

#### FLAME RESISTANT INHERENT TROUSERS WITH STRETCH

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8900** Navy blue  
30R-48R, 34S-49S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. Stretch panel in the crotch, on the knee and back. Pre-bent knees. **DETAILS:** External labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Leg pockets with bellow, telephone pocket and pen pocket. Leg pockets with flap and button closure. Inset pockets. **FINISH:** C sizes can be extended to C100 sizes. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, class 1. ATPV: 10,7 cal/cm<sup>2</sup>, HAF 72,5% (stretch material).



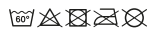
4948

## SOFTSHELL JACKET MULTINORM

Metal- and polyester-free softshell jacket in Hi-vis that is inherently flame-retardant. The wind and water-resistant jacket is made of softshell material and has excellent breathability. It also has an extended back, pre-bent sleeves and cuffs at the sleeve ends that improve the already fantastic comfort. The jacket is equipped with two gas loops, which are hoops to hang gas detectors and oxygen meters in. This makes the softshell jacket extra useful for work in, for example, petrochemical environments or the oil and gas industry.



4448



4948

### MULTINORM SOFTSHELL JACKET

**1560** 44% modacrylic, 29% cotton, 11% polyamide, 6% polyurethane, 5% polyester, 3% Aramid, 2% antistatic, 3-layer softshell, flame resistant, antistatic, laminated, chemical splash(EN13034), 490 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Breathable wind- and water-proof material, no taped seams, making the garment highly water resistant. Metal-free. Oil, dirt and water repellent. **DETAILS:** External labels. Loops placed on both sides of chest for placement of microphone and other accessories. Plastic snaps. Fleece lined collar. High collar with covered zipper. D-ring. **POCKETS:** Chest pocket with zipper. Front pockets with zipper. Inner telephone pocket. **FRONT CLOSURE:** Front closure with hidden push buttons in plastic. Robust hidden one-way plastic zipper. **REFLEX:** 50 mm wide flame resistant reflective tape. Printed reflective tape. **FINISH:** Sleeve end with elastic band and wristlet.

**CERTIFICATION:** EN 1149-5, EN 13034 PB [6], Certified according to EN ISO 20471, XS-S Class 2, M-> Class 3, EN ISO 11611 class 2, A1+A2, EN ISO 11612 A1, A2, B1, C2, F2, ELIM - 30 cal/cm<sup>2</sup>, EBT - 33 cal/cm<sup>2</sup>, IEC 61482-2, APC 2.



4088

### MULTINORM SHELL JACKET

**1532** 59% viscose, 40% modacrylic, 1% antistatic, laminated, waterproof 16000 mm, windproof, breathable Ret 12,6, 250 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Breathable windproof material. Metal-free. Oil, dirt and water repellent. Water and grime-repellent outer fabric. **LINING:** Lined. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. Hidden buttons. Plastic snaps. Fleece lined collar. High collar with zipper. Hood adapted for helmet and hearing protection. Removable, adjustable hood. Attaches to D-ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Chest pocket with D-ring. Chest pocket with zipper. Inner pocket. Napoleon pocket inside front wind flap. Side pockets with fleece lining. Side pockets with zipper. **FRONT CLOSURE:** Front closure with hidden push buttons in plastic. Robust hidden two-way plastic zipper. **REFLEX:** 50 mm wide flame resistant reflective tape. Printed reflective tape. **FINISH:** Adjustable hem with drawstring. Extended back. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], Certified according to EN ISO 20471, XS-S Class 2, M-> Class 3, EN 343, Class 4, 3, EN ISO 11611 class 2, A1+A2, EN ISO 11612 A1, A2, B1, C1, D1, E3, F1, IEC 61482-2, APC 2, ATPV - 21 cal/cm<sup>2</sup>, ELIM - 19 cal/cm<sup>2</sup>.



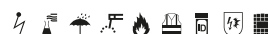
1881

### MULTINORM SHELL TROUSERS

**1532** 59% viscose, 40% modacrylic, 1% antistatic, laminated, waterproof 16000 mm, windproof, breathable Ret 12,6, 250 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Breathable windproof material. Metal-free. Oil, dirt and water repellent. Water and grime-repellent outer fabric. **LINING:** Lined. **DETAILS:** External certification labels. Plastic zipper fly. Straps. Extended waistband back. Taped seams. Removable ID-pocket for flame retardant clothes. Adjustable and removable braces with elastic. **POCKETS:** Leg pocket with bellow and flap. Front pockets with flap and push button. Front pockets with fleece lining. Outer knee protection pocket. Ruler pocket with knife- and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knees. **REFLEX:** Printed reflective tape. **FINISH:** Adjustable leg bottom with openable snow gaiter. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032, EN ISO 20471, Class 2, EN 343, Class 4, 3, EN ISO 11611 class 2, A1+A2, EN ISO 11612 A1, A2, B1, C1, D1, E3, F1, IEC 61482-2, APC 2, ATPV - 21 cal/cm<sup>2</sup>, ELIM - 19 cal/cm<sup>2</sup>.





## FLAME RESISTANT WOMENSWEAR ♀

1512 fabric is an inherent fabric which means that its flame retardant properties are built into the fibres. The flame retardant qualities exist within the molecular structure of the fibre and cannot be worn off or washed away. Inherent garments are therefore sustainable, lightweight, comfortable and guaranteed to protect against flames throughout the entirety of their service lives.

The material complies with the following standards: EN 1149-3, EN ISO 11611 class 1, A1+A2, EN ISO 11612 A1+A2, B1, C1, E1, F1, EN 61482-1-1 11,9cal/cm<sup>2</sup>, EN 61482-1-2 class 1, EN 13034, EN ISO 20471, HAF: 79.3% LOI: 29.6 %.

We recommend industrial laundering for a longer life. The reflective parts are designed for hard wear and industrial laundering. If the garment is not being washed professionally, follow the care instructions. Softener or detergents with bleach should not be used.

Quality 1512 is tested and approved after 50 industrial washes according to EN ISO 11612 (A1, B1, C1), EN 1149-3 and EN ISO 20471.



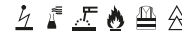
### 4969

WOMEN'S MULTINORM INHERENT JACKET

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-XXXL

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. High collar with zipper. **POCKETS:** Chest pocket with D ring. Chest pockets with covered zipper. Covered side pockets with hidden metal buttons. **FRONT CLOSURE:** Front closure with hidden push buttons in plastic. Robust hidden one-way plastic zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN ISO 20471, Class 2. Together with art 7189 obtains to class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79.3%, LOI: 29.6%.



### 7189

WOMEN'S MULTINORM INHERENT TROUSERS

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
6R-22R, 12S-24S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External labels. Plastic zipper fly. Loops, one with D ring. Removable ID pocket. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with flap and telephone pocket. Angled front pockets. Knee protection pockets. Reinforced ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 2. Together with art 4969 obtains to class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79.3%, LOI: 29.6%.



### 7188

WOMEN'S MULTINORM INHERENT TROUSERS

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
6R-22R, 12S-24S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Leg pocket with flap and press stud. Angled inset pockets. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79.3%, LOI: 29.6%.



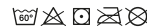


**7191**TROUSERS MULTINORM INHERENT WITH  
STRETCH WOMEN

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
6R-22R, 12S-24S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. Stretch panel in crotch and backside. Pre-bent knees. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Elastic at waistline. Removable ID pocket. **POCKETS:** Back pocket. Leg pocket with bellow, flap and phone pocket. Inset pockets. Outer knee protection pocket. Reinforced ruler pocket with possibility of two placements of knife and one pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 2. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, APC 1. ATPV - 10,7 cal/cm<sup>2</sup>.

**7187**TROUSERS MULTINORM INHERENT WITH  
STRETCH WOMEN

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
6R-22R, 12S-24S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. Stretch panel in crotch and backside. Pre-bent knees. **DETAILS:** External certification labels. Plastic zipper fly. Loops, one with D ring. Elastic at waistline. Removable ID pocket. **POCKETS:** Back pocket. Leg pocket with bellow, flap and phone pocket. Inset pockets. Outer knee protection pocket. Reinforced ruler pocket with possibility of two placements of knife and one pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, APC 1. ATPV - 10,7 cal/cm<sup>2</sup>.



NEW!

**7185**TROUSERS MULTINORM INHERENT WITH  
STRETCH WOMEN

**1512** 44% modacrylic, 30% cotton, 20% FR polyamide, 5% aramid, 1% antistatic, ripstop, flame resistant, antistatic, 260 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
6R-22R, 12S-24S

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. Stretch panel in crotch and backside. **DETAILS:** External certification labels. Plastic zipper fly. Plastic buttons. D ring in waistline. Elastic at waistline. Removable ID pocket. **POCKETS:** Back pocket. Leg pocket with bellow, flap and phone pocket. Outer knee protection pocket. Reinforced, three-compartment nail pockets on front. Reinforced ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. ISO 11612 A1, B1, C1, E1. IEC 61482-2, APC 1. ATPV - 10,7 cal/cm<sup>2</sup>.



NEW!

**4917**

MULTINORM WINTER JACKET WOMEN



**1534** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, ripstop, flame resistant, antistatic, laminated, waterproof 12000 mm, windproof, breathable Ret 8,15, 290 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-XXXL

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Dark colour field in high grime-exposure sections. Metal-free. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of microphone and other accessories. Plastic snaps. High collar with covered zipper. With buttons for attachment of hood (sold separately, 2167). Taped seams. D-ring. Good surface for transfer. **POCKETS:** Chest pockets with zipper and D-ring. Inner document pocket. Fleece-lined inset pocket with zipper. Inner pockets, one with zipper. **FRONT CLOSURE:** Front closure with push buttons. Robust hidden two-way plastic zipper. **REFLEX:** Reflective details on shoulder. Segmented flame resistant transfer reflective tape. **FINISH:** Adjustable hem with drawstring. Extended back. Adjustable sleeve end with velcro and wristlet. **CERTIFICATION:** ATPV - 39 cal/cm<sup>2</sup>. ELIM - 33cal/cm<sup>2</sup>. EN 61482-2, APC 2. EN 1149-5. EN 13034 PB [6]. EN ISO 20471, Class 2. EN ISO 20471, Class 3 together with 1817. Certified according to EN 342 when used with art 1817. EN 343, Class 4,1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, C1, E3, F1.



NEW!

**4448**

SOFTSHELL JACKET MULTINORM WOMEN



**1560** 44% modacrylic, 29% cotton, 11% polyamide, 6% polyurethane, 5% polyester, 3% Aramid, 2% antistatic, 3-layer softshell, flame resistant, antistatic, laminated, chemical splash(EN13034), 490 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-XXXL

**FUNCTIONALITY:** Metal-free. Oil, dirt and water repellent. **DETAILS:** External certification labels. Hidden buttons. High collar with covered zipper. D-ring. **POCKETS:** Chest pocket with zipper. Front pockets with zipper. **FRONT CLOSURE:** Front closure with push buttons. Robust hidden two-way plastic zipper. **REFLEX:** Reflective details on shoulder. Segmented flame resistant transfer reflective tape. **FINISH:** Bottom hem adjustable with elastic band. Extended back. Inner wristlet at sleeve end. Cuff with elastic band. **CERTIFICATION:** EBT - 33 cal/cm<sup>2</sup>. ELIM - 30cal/cm<sup>2</sup>. EN 61482-2, APC 2. EN 1149-5. EN 13034 PB [6]. EN ISO 20471, Class 2. EN ISO 11611 class 2, A1+A2. EN ISO 11612 A1, A2, B1, C2, F2.

**3494**FLAME RESISTANT LONG SLEEVED WOMEN'S  
T-SHIRT

**1761** 48% modacrylic, 42% cotton, 5% Aramid, 3% polyamide, 2% antistatic fibre, interlock, flame resistant, antistatic, 250 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-XXXL

**DETAILS:** External certification labels. Round neck. Vent on side. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5. EN ISO 20471, Class 1. IEC 61482-2, APC 1. ATPV - 13,1 cal/cm<sup>2</sup>. EN ISO 11612 A1, B1, C1, E1, F1.



# FLAME

The new 1516 fabric is a flame-retardant material designed for durability and comfort. The cotton-rich fabric ensures wearability and maximum protection in one.

The fabric is certified to EN 1149-3, EN61482-1-1 ATPV: 16,0 cal/cm<sup>2</sup>, HAF 82%, EN 61482-1-2 class 1, EN ISO 11611 class 1, EN ISO 11612, A1, A2, B1, C1, E3, F1, EN 13034.

We recommend professional industrial laundering for extended garment life. The reflectors are designed to withstand heavy-duty use and industrial laundering. If the garment is not laundered professionally, follow the care instructions. Softener or detergents with bleach should not be used.

Quality 1516 is tested and approved after 50 industrial washes according to: EN ISO 11612 (A1, B1, C1) och EN 1149-3.



NEW!

4071



FLAME RESISTANT JACKET WOMEN

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

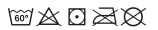
**9994** Black/Grey  
XS-XXXL

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal buttons. Plastic snaps. High collar with covered zipper. D-ring. **POCKETS:** Chest pockets with zipper and D-ring. Front pockets with bellows and flap. Inner pocket with telephone pocket. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Hidden one-way metal zipper. **REFLEX:** Reflective details. **FINISH:** Adjustable hem with press studs. Adjustable wristband with press studs. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, APC 1. ATPV - 16 cal/cm<sup>2</sup>.



NEW!

7173



FLAME RESISTANT TROUSERS WOMEN

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**9994** Black/Grey  
6R-22R, 12S-24S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Hidden buttons. Metal button. Elastic at waistline. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow and flap. Leg pocket with bellow, flap and phone pocket. Inset pockets. Inner knee protection pockets. Reinforced ruler pocket with knife holder and pen pocket. **REFLEX:** Reflective details. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, APC 1. ATPV - 16 cal/cm<sup>2</sup>.



# MULTINORM HEAVYWEIGHT

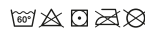
1514 fabric is a flame-retardant blend and was selected for its superior combination of strength and comfort. The cotton-rich fabric ensures wearability and maximum protection in one.

The fabric is certified to EN 1149-3, EN 61842-1-1 APTV: 11,0 cal/cm<sup>2</sup>, HAF: 82%, EN 61482-1-2 Class 1, EN ISO 11611 Class 1, EN ISO 11612 A1 A2 B1 C1 E3 F1, EN 13034, EN ISO 20471.

Quality 1514 is tested and approved after 50 industrial washes according to: EN ISO 11612 (A1, B1, C1) och EN 1149-3 and approved after 30 industrial washes to: EN ISO 20471.



4091



JACKET MULTINORM WOMEN

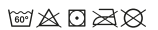
**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-XXXL

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. High collar with covered zipper. **POCKETS:** Chest pockets with zipper and D-ring. Front pockets with flap and push button. Inner pocket with velcro closure. **FRONT CLOSURE:** Robust hidden one-way metal zipper. **REFLEX:** 50 mm wide reflective tape. Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with press studs. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN ISO 20471 class 2 XS-S, class 3 M -->. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, APC 1. ATPV - 11 cal/cm<sup>2</sup>.



7181

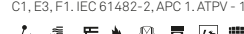


TROUSERS MULTINORM WOMEN

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
6R-22R, 12S-24S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Straps. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with flap, hidden with metal buttons. Leg pocket with bellow, flap and pen pocket, extra pocket, telephone pocket and ID pocket. Front pockets with flap and push button. Inner knee protection pockets. Reinforced ruler pocket with knife holder and pen pocket. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, APC 1. ATPV - 11 cal/cm<sup>2</sup>.

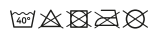


**7213**

FLAME RESISTANT WOMEN'S THERMAL TOP, 68% MERINO WOOL

**1075** 68% wool, 30% modacrylic, 2% antistatic, merino interlock, flame resistant, 225 g/m<sup>2</sup>**9900** Black  
XS-XXXL**DETAILS:** External certification labels. Rib-knitted neck. Seams in contrasting colour. **FINISH:** Rib-knit sleeve. **CERTIFICATION:** EN 1149-5, ISO 11612 A1, B1, C1, ELIM - 6,2 cal/cm<sup>2</sup>, IEC 61482-2, APC 1, EBT - 7,3 cal/cm<sup>2</sup>.**1825**

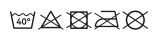
FLAME RESISTANT SPORTS BRA WOMEN

**1722** 57% modacrylic, 37% cotton, 4% elastane, 2% antistatic, 1x1 rib antistatic Flame resistant 335 g/m<sup>2</sup>**8900** Navy blue  
XS-XXXL**MAIN** material: Double fabric. **DETAILS:** External labels. **FINISH:** Elastic bottom. **CERTIFICATION:** EN 1149-5, EN ISO 14116, index 3.**7203**

FLAME RESISTANT LONG UNDERWEAR, WOMEN, 68% MERINO WOOL

**1075** 68% wool, 30% modacrylic, 2% antistatic, merino interlock, flame resistant, 225 g/m<sup>2</sup>**9900** Black  
XS-XXXL**DETAILS:** External certification labels. Elastic at waistline. Seams in contrasting colour. **FINISH:** Cuffed trouser bottom. **CERTIFICATION:** EN 1149-5, ISO 11612 A1, B1, C1, ELIM - 6,2 cal/cm<sup>2</sup>, IEC 61482-2, APC 1, EBT - 7,3 cal/cm<sup>2</sup>.**1826**

FLAME RESISTANT BOXER SHORTS WOMEN

**1722** 57% modacrylic, 37% cotton, 4% elastane, 2% antistatic, 1x1 rib antistatic Flame resistant 335 g/m<sup>2</sup>**8900** Navy blue  
XS-XXXL**FUNCTIONALITY:** Women's cut. **DETAILS:** External labels. Elastic at waistline. **CERTIFICATION:** EN 1149-5, EN ISO 14116, index 3.



# INHERENT STEEL

Quality 1519 is an inherent Class E3 fabric, specially designed for work in metal industries that deal with molten iron. The flame-retardant clothing in the Inherent Steel collection is designed to protect against splashing from molten metals. Garments in the Inherent Steel range include the jacket 4505, winter jacket 4515, trousers 1705 and the bib trousers 2605.

The fabric meets EN 1149-3, EN ISO 11611 Cl 1 A1, A2, EN ISO 11612 A1, A2, B1, C1, E3, F1, EN 61482-1-1 ATPV: 14cal/cm<sup>2</sup> ELIM: 12cal/cm<sup>2</sup>, EN 61482-1-2 APC 1, EN ISO 20471, EN 13034, EN 15797.

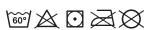
We recommend industrial laundry for a longer product life (but not for lined winter jacket 4515). The reflectors are designed for hard wear and industrial laundry. If not washed professionally, follow the washing instructions. Do not use fabric softener or bleach detergents.

Quality 1516 is tested and approved after 50 industrial washes to: EN ISO 11612 (A1, B1, C1), EN 1149-3 and EN ISO 20471.



## 4505

### JACKET INHERENT STEEL



**1519** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, twill, flame resistant, antistatic, 320 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-4XL

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. High collar with covered zipper. **POCKETS:** Chest pockets with zipper. Covered side pockets with hidden metal buttons. Inner pocket. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Robust hidden one-way metal zipper. **REFLEX:** 20mm wide flame resistant reflective tapes. Reflectors on shoulders, sleeves and the back lower edge. **FINISH:** Adjustable hem with press studs. Adjustable sleeve end with press studs. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. ELIM - 12cal/cm<sup>2</sup>. ATPV - 14cal/cm<sup>2</sup>. IEC 61482-2, APC 1. Hi-vis certification not applicable.



## 4515

### WINTER JACKET INHERENT STEEL



**1519** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, twill, flame resistant, antistatic, 320 g/m<sup>2</sup>

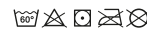
**8933** Navy blue/Hi-vis yellow  
XS-4XL

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. High collar with covered zipper. **POCKETS:** Chest pockets with zipper and D-ring. Covered side pockets with hidden metal buttons. Inner pocket. **FRONT CLOSURE:** Robust hidden one-way metal zipper. **REFLEX:** 20mm wide flame resistant reflective tapes. Reflectors on shoulders, sleeves and the back lower edge. **FINISH:** Adjustable hem with press studs. Adjustable sleeve end with press studs. **CERTIFICATION:** ATPV - 40 cal/cm<sup>2</sup>. ELIM - 37cal/cm<sup>2</sup>. EN 61482-2, APC 2. EN 1149-5, EN 13034 PB [6]. EN 342 together with 1869-1514. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. Hi-vis certification not applicable.



## 1705

### TROUSERS INHERENT STEEL



**1519** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, twill, flame resistant, antistatic, 320 g/m<sup>2</sup>

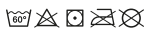
**8933** Navy blue/Hi-vis yellow  
30R-48R, 32L-40L, 34S-47S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Straps. Removable ID pocket. **POCKETS:** Back pockets with bellow. Back pockets with flap, hidden with metal buttons. Leg pocket with bellow, flap and pen pocket, extra pocket, telephone pocket and ID pocket. Inset pockets. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4057. EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. ELIM - 12cal/cm<sup>2</sup>. ATPV - 14cal/cm<sup>2</sup>. IEC 61482-2, APC 1.



## 2605

### BIB TROUSERS INHERENT STEEL



**1519** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, twill, flame resistant, antistatic, 320 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
32R-48R, 36S-47S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Adjustable waistline. Removable ID pocket. Adjustable braces with elastic. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with flap and pen pocket. Angled front pockets. Outer knee protection pocket. Ruler pocket with knife- and pen pocket. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4057. EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. ELIM - 12cal/cm<sup>2</sup>. ATPV - 14cal/cm<sup>2</sup>. IEC 61482-2, APC 1.







# ORANGE INHERENT

Our 1513 fabric is an inherent material, which means that the flame retardant properties are naturally present in its fibres. The flame retardant qualities exist within the molecular structure of the fibre and cannot be worn off or washed away. Inherent garments are therefore durable, lightweight, comfortable to wear and guarantee life-long flame protection.

The fabric complies with the following standards: EN 1149-3; EN ISO 11611 class 1, A1+A2; EN ISO 11612 A1+A2, B1, C1, E1, F1; EN 61482-1-1 ATPV= 16.0 cal/cm<sup>2</sup>; EN 61482-1-2 class 1; EN 13034; EN ISO 20471; GO/RT 3275.

Blåkläder combines the 1513 fabric with 1512 in all of its orange clothing, which is why the garments are marked on the outside with 11.9 cal/cm<sup>2</sup> instead of 16.0 cal/cm<sup>2</sup>.



## 4089

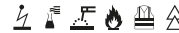
### MULTINORM INHERENT JACKET



**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**5389** Orange/Navy blue  
XS-4XL

**FUNCTIONALITY:** Oil, dirt and water repellent. Pre-bent sleeves. **DETAILS:** Shoulder sections in contrasting colour. External certification labels, Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. High collar with zipper. D-ring. **POCKETS:** Chest pocket with D ring. Chest pockets with covered zipper. Covered side pockets with hidden metal buttons. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Robust hidden one-way metal zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. Reflectors on shoulders. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], Certified according to EN ISO 20471, XS-S Class 2, M-> Class 3. Class 2 and 3 garments in orange colourways are in compliance with RIS-3279-TOM issue 2. Together with art. 1488, 1489, 1588, 1589 or 2889 obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



## 1488

### MULTINORM INHERENT TROUSERS



**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**8953** Navy blue/Orange  
30R-48R, 34S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Leg pocket with flap and press stud. Angled inset pockets. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. C sizes can be extended to C100 sizes. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



## 1489

### MULTINORM INHERENT TROUSERS



**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

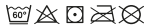
**8953** Navy blue/Orange  
30R-48R, 34S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced. Leg pocket with bellow, telephone pocket and pen pocket. Angled front pockets. Outer knee protection pocket. Reinforced, three-compartment nail pockets on front. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. C sizes can be extended to C100 sizes. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. EN ISO 11612 A1, A2, B1, C1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



## 2888

### BIB TROUSERS MULTINORM INHERENT



**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**8953** Navy blue/Orange  
32R-48R, 34S-47S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Adjustable waistline. Removable ID-pocket for flame retardant clothes. Adjustable braces with elastic. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with flap and pen pocket. Angled front pockets. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, APC 1. ATPV - 11,9 cal/cm<sup>2</sup>.





## 1588

**MULTINORM INHERENT TROUSERS**

**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**5389** Orange/Navy blue  
30R-48R, 34S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, flap and pen pocket, extra pocket, telephone pocket and ID pocket. Angled front pockets. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. C sizes can be extended to C100 sizes. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. Class 2 and 3 garments in orange colourways are in compliance with RIS-3279-TOM issue 2. EN ISO 20471, Class 2. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



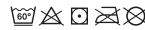
## 1589

**MULTINORM INHERENT TROUSERS**

**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**5389** Orange/Navy blue  
30R-48R, 34S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced. Leg pocket with bellow, telephone pocket and pen pocket. Angled front pockets. Outer knee protection pocket. Reinforced, three-compartment nail pockets on front. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable leg bottom width with plastic snap buttons. C sizes can be extended to C100 sizes. **CERTIFICATION:** EN 1149-5. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. Class 2 and 3 garments in orange colourways are in compliance with RIS-3279-TOM issue 2. EN ISO 20471, Class 2. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. EN ISO 11612 A1, A2, B1, C1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



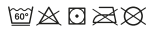
## 2889

**MULTINORM INHERENT BIB**

**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**5389** Orange/Navy blue  
32R-48R, 34S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Adjustable waistline. Removable ID-pocket for flame retardant clothes. Adjustable braces with elastic. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with flap and pen pocket. Angled front pockets. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** C sizes can be extended to C100 sizes. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. Class 2 and 3 garments in orange colourways are in compliance with RIS-3279-TOM issue 2. EN ISO 20471, Class 2. Together with art. 4089 XS-S obtains class 3 according to EN ISO 20471. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



## 6089

**MULTINORM INHERENT OVERALLS**

**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**5389** Orange/Navy blue  
32R-48R

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Shoulder sections in contrasting colour. External certification labels. Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. High collar with zipper. Adjustable waistline. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with hidden metal zipper. Front pockets with flap and push button. Opening with flap for gripping underlying garment. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Robust hidden two-way metal zipper. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. Reflectors on shoulders. **FINISH:** C sizes can be extended to C100 sizes. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. Class 2 and 3 garments in orange colourways are in compliance with RIS-3279-TOM issue 2. EN ISO 20471, Class 3. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 11,9cal/cm<sup>2</sup>, HAF: 79,3%, LOI: 29,6%.



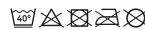
## 4069

**MULTINORM INHERENT WINTER JACKET**

**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**5389** Orange/Navy blue  
XS-4XL

**FUNCTIONALITY:** Dark colour field in high grime-exposure sections. Lined. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of microphone and other accessories. Fleece lined collar. High collar with zipper. Removable ID-pocket for flame retardant clothes. **POCKETS:** Chest pocket with flap. Chest pocket with hidden metal zipper. Inset pocket with flap. Inner pocket with velcro closure. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Robust hidden one-way metal zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. Class 2 and 3 garments in orange colourways are in compliance with RIS-3279-TOM issue 2. EN ISO 20471, XS-L class 2, XL-> class 3. EN 342 together with med 1869-1513. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E1, F1. IEC 61482-2, class 2.



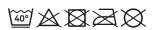
## 1869

**MULTINORM INHERENT WINTER TROUSERS**

**1513** 40% modacrylic, 24% FR viscose, 20% polyester, 10% cotton, 4% Aramid, 2% Antistatic, double weave, flame resistant, antistatic, 310 g/m<sup>2</sup>

**8953** Navy blue/Orange  
30R-48R, 34S-47S

**FUNCTIONALITY:** Lined. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Leg pocket with bellow, telephone pocket and pen pocket. Angled front pockets. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN ISO 20471, Class 1. EN 342 together with 4069-1513. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 2.





# MULTINORM HEAVYWEIGHT

1514 fabric is a flame-retardant blend and was selected for its superior combination of strength and comfort. The cotton-rich fabric ensures wearability and maximum protection in one.

Styles 1478, 1479, 1578, 1579, 2607, 2608, 2678, 6378, 1869 are reinforced with knee pads in an inherent flame-retardant blend. The unique blend and high percentage of CORDURA® give the material enhanced durability.

The fabric is certified to EN 1149-3, EN 61842-1-1 APTV:11,0 cal/cm<sup>2</sup>, HAF:82%, EN 61482-1-2 Class 1, EN ISO 11611 Class 1, EN ISO 11612 A1 A2 B1 C1 E3 F1, EN 13034, EN ISO 20471.

We recommend professional industrial laundering for extended garment life. The reflectors are designed to withstand heavy-duty use and industrial laundering. If the garment is not laundered professionally, follow the care instructions. Softener or detergents with bleach should not be used.

Quality 1514 is tested and approved after 50 industrial washes to: EN ISO 11612 (A1, B1, C1) and EN 1149-3 and approved after 30 industrial washes to: EN ISO 20471.



**4087**

MULTINORM JACKET



**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Bellow on back. External certification labels. High collar with zipper. Removable ID-pocket for flame retardant clothes. **POCKETS:** Chest pocket with hidden metal zipper. Chest pockets with flap. Inset pocket with flap. Inner pocket with velcro closure. Inner telephone pocket. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Robust hidden one-way metal zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN ISO 20471, XS Class 2, S -> Class 3. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.



**4467**

FLAME RESISTANT WINTER PARKA



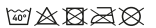
**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Oil, dirt and water repellent. **LINING:** Warm lined. **DETAILS:** External certification labels. Hidden buttons. Metal press studs. Fleece lined collar. High collar with covered zipper. With buttons for attaching a hood (sold separately, 2169). Adjustable waistline. D-ring. **POCKETS:** Chest pocket with bellow and flap. Document pocket in front. Front pockets with flap and side pockets. Front pockets with fleece lining. Inner pocket with velcro closure. **FRONT CLOSURE:** Robust hidden two-way metal zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Extended back. Inner wristlet at sleeve end. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN ISO 20471, Class 3. EN 342 together with 1869-1514. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, APC 2, ATPV - 43 cal/cm<sup>2</sup>.



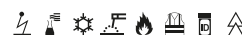
**4069**

MULTINORM WINTER JACKET



**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**3389** Hi-vis yellow/navy blue  
XS-6XL

**FUNCTIONALITY:** Lined. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of microphone and other accessories. Fleece lined collar. High collar with zipper. With buttons for attaching a hood (sold separately, 2169). Removable ID-pocket for flame retardant clothes. **POCKETS:** Chest pocket with flap. Chest pocket with hidden metal zipper. Inset pocket with flap. Inner pocket with velcro closure. Inner telephone pocket. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Robust hidden one-way metal zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN ISO 20471, XS-L class 2, XL-> class 3, EN 342 together with 1869-1514. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 2. ATPV: 43,0 cal/cm<sup>2</sup>.






**1478**
**MULTINORM TROUSERS**

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
32R-48R, 32L-42L, 34S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Side hammer loop. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with flap, hidden with metal buttons. Leg pocket with flap and telephone and pen pocket. Inset pocket with flap. Inner knee protection pockets. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.


**1578**
**MULTINORM CRAFTSMAN TROUSERS**

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
30R-48R, 32L-40L, 34S-45S

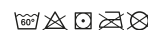
**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Side hammer loop. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pocket with bellow and flap, with button closure. Leg pocket with bellow, telephone pocket and pen pocket. Inset pocket with flap. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 2. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.


**1516**
**FLAME RESISTANT DETACHABLE NAIL POCKET**

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3300** Hi-vis yellow, **8900** Navy blue  
One size

**FUNCTIONALITY:** Oil, dirt and water repellent. To be attached to belt. **POCKETS:** Nail pockets - in three parts and extra wide. **PACKAGING:** Sold in pairs. **FITS WITH:** Blåkläders trouser without nailpockets. Belt 4039.


**1869**
**MULTINORM WINTER TROUSERS**

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
30R-48R, 32L-42L, 34S-47S

**FUNCTIONALITY:** Lined. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Leg pocket with bellow, telephone pocket and pen pocket. Angled front pockets. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN ISO 20471, Class 1. EN 342 together with 4069-1514, 4784-1516 och 4961-1516. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 2. ATPV: 43,0 cal/cm<sup>2</sup>.


**1579**
**MULTINORM CRAFTSMAN TROUSERS**

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
30R-48R, 32L-42L, 34S-45S

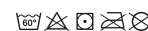
**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Side hammer loop. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with flap and button closure. Leg pocket with flap and telephone and pen pocket. Inset pockets. Outer knee protection pocket. Reinforced, three-compartment nail pockets on front. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 2. EN ISO 11612 A1, A2, B1, C1, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.


**1479**
**MULTINORM CRAFTSMAN TROUSERS**

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
30R-48R, 32L-42L, 34S-45S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Side hammer loop. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets. Leg pocket with flap and telephone and pen pocket. Inset pockets. Inner knee protection pockets. Reinforced, three-compartment nail pockets on front. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 1. EN ISO 11612 A1, A2, B1, C1, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.





## 2608

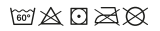
### MULTINORM BIB TROUSERS

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue

32R-48R, 32L-42L, 36S-45S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Side hammer loop. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. Adjustable braces with elastic. **POCKETS:** Back pockets with bellow, reinforced and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with flap and pen pocket. Inset pocket with flap. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 2. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.



## 2607

### BIB TROUSERS MULTINORM CLASS 1

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow

32R-48R, 34S-47S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Adjustable waistline. Removable ID-pocket for flame retardant clothes. Adjustable braces with elastic. **POCKETS:** Back pockets with flap, hidden with metal buttons. Chest pocket with flap and covered push buttons. Inset pockets with side openings. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 1. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, APC 1. ATPV - 11 cal/cm<sup>2</sup>.



## 6378

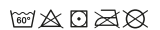
### MULTINORM OVERALLS

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue

32R-48R, 32L-42L, 36S-45S

**FUNCTIONALITY:** Oil, dirt and water repellent. Stretch panel in back. **DETAILS:** Bellow on back. External certification labels. High collar with zipper. Adjustable with drawstrings in waistline. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow and flap. Leg pocket with bellow, telephone pocket and pen pocket. Chest pocket with hidden metal zipper. Chest pockets with flap. Inset pocket with flap. Opening with flap for gripping underlying garment. Inner pocket with velcro closure. Knee protection pockets. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Robust hidden two-way metal zipper. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 3. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.



## 2678

### MULTINORM SLEEVELESS OVERALL

**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue

32R-48R, 32L-42L, 36S-45S

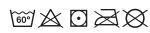
**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Adjustable at shoulder seam. External certification labels. Side hammer loop. Adjustable waistline. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow and flap. Leg pocket with bellow, telephone pocket and pen pocket. Loose-hanging chest pockets with nail pockets, one with telephone pocket and one with pen pocket. Front pockets with flap and push button. Inset pocket with flap. Outer knee protection pocket. Ruler pocket with knife holder and pen pocket. **FRONT CLOSURE:** Robust hidden two-way metal zipper. **REINFORCEMENT:** CORDURA®/Kevlar®/Protal®-reinforcement on knee. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027 and 4057, EN ISO 20471, Class 2. Certified according to EN ISO 11611, Class 1 A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>, HAF: 82,0%.





## 3078

MULTINORM WAISTCOAT



**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3300** Hi-vis yellow

S-XXXL

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Side hammer loop. Wide belt-loops. Removable ID-pocket for flame retardant clothes. Opening in back for fastening safety harness.

**POCKETS:** Loose-hanging chest pockets with nail pockets, one with telephone pocket and one with pen pocket. Front pockets with flap. Nail pockets - front and back. Nail pockets - in three parts and extra wide. **FRONT CLOSURE:** Double zippers at the front for adjustable width. Robust hidden one-way metal zipper. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **WASH:** Industry laundry EN ISO 15797.

**CERTIFICATION:** EN 1149-5. EN ISO 20471, Class 2. EN ISO 11612 A1,A2,B1,C1,F1. IEC 61482-2, class 1. ATPV: 11,0 cal/cm<sup>2</sup>. HAF: 82,0%.

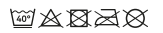


MATCHES 4467  
AND 4069



## 2169

FLAME RESISTANT WINTER HOOD



**1514** 75% cotton, 24% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue

One size

**FUNCTIONALITY:** Oil, dirt and water repellent. Article 4069, 4467. **LINING:** Warm lined. **REFLEX:** Reflective detail on hood.





# MULTINORM HEAVYWEIGHT

Our 1530 fabric is a strong and durable inherent material, meaning that the flame retardant is built into the fibres. The material is also laminated for rain and wind protection.

The garments are lined and have taped seams. The fabric is certified to EN 1149-3, EN 61482-1-2 Class 1, EN ISO 11611 Class 1, EN ISO 11612 A1 B1 C1 E3 F1, EN 13034, EN ISO 20471, EN 343 Class 4.1.

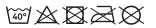
We recommend professional industrial laundering for extended garment life. The reflectors are designed to withstand heavy-duty use and industrial laundering. If the garment is not laundered professionally, follow the care instructions. Softener or detergents with bleach should not be used.

Quality 1530 is tested and approved after 30 industrial washes according to: EN ISO 20471.



## 4068

MULTINORM WINTER JACKET



**1530** 55% modacrylic, 43% cotton, 2% antistatic, twill, flame resistant, antistatic, laminated, wind- and waterproof, breathable, 300g/m<sup>2</sup>

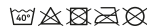
**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Fleece lined collar. High collar with zipper. With buttons for attachment of hood (sold separately, 2168). Removable ID-pocket for flame retardant clothes. **POCKETS:** Chest pocket. Inset pocket with flap. Inner pockets, one with telephone pocket. **FRONT CLOSURE:** Robust hidden one-way metal zipper. Wind flap with velcro. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Adjustable hem with velcro. Extended back. Inner wristlet at sleeve end. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN ISO 20471, Class 3. Certified according to EN 342 when used with art: 1868, EN 343, Class 4.1, EN ISO 11611, Class 1 A1, EN ISO 11612 A1, B1, C1, E3, F1, ATPV - 34cal/cm<sup>2</sup>, ELIM - 30 cal/cm<sup>2</sup>, IEC 61482-2, APC 2.



## 1868

MULTINORM WINTER TROUSERS



**1530** 55% modacrylic, 43% cotton, 2% antistatic, twill, flame resistant, antistatic, laminated, wind- and waterproof, breathable, 300g/m<sup>2</sup>

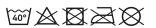
**3389** Hi-vis yellow/navy blue  
32R-46R, 36S-43S

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Extended waistband back. Snow gaiter with velcro and button opening. Removable ID-pocket for flame retardant clothes. Adjustable and removable braces. **POCKETS:** Back pockets with flap and velcro closure. Leg pocket with flap and velcro and pen pocket. Inset pocket with flap. Outer knee protection pocket. Ruler pocket with knife holder. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Leg end with zipper. **FITS WITH:** Article 4068, Article 4468. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4057, EN ISO 20471, Class 2. Certified according to EN 342 when used with art: 4068 or 4468, EN 343, Class 4.1, EN ISO 11611, Class 1 A1, EN ISO 11612 A1, B1, C1, E3, F1, ATPV - 34cal/cm<sup>2</sup>, ELIM - 30 cal/cm<sup>2</sup>, IEC 61482-2, APC 2.



## 6368

MULTINORM WINTER OVERALL



**1530** 55% modacrylic, 43% cotton, 2% antistatic, twill, flame resistant, antistatic, laminated, wind- and waterproof, breathable, 300g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
32R-46R

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. High collar with zipper. With buttons for attachment of hood (sold separately, 2168). Adjustable with drawstrings in waistline. Snow gaiter with velcro and button opening. Taped seams. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with flap and velcro closure. Leg pocket with flap and telephone and pen pocket. Thigh pocket. Chest pocket with flap. Inset pocket with flap. Inner pocket with velcro closure. Knee protection pockets. Outer knee protection pocket. Inner telephone pocket. Ruler pocket with knife holder. **FRONT CLOSURE:** Robust hidden two-way metal zipper. Wind flap with velcro. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Leg bottom with openable snow gaiter. Leg end with zipper. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4057, EN ISO 20471, Class 3, EN 342, EN 343, Class 3.1, EN ISO 11611, Class 2 A1, ISO 11612 A1, B1, C1, IEC 61482-2, class 2, ATPV: 34,0 cal/cm<sup>2</sup>.





## 4468

MULTINORM WINTER PARKA

**1530** 55% modacrylic, 43% cotton, 2% antistatic, twill, flame resistant, antistatic, laminated, wind- and waterproof, breathable, 300g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-XXXL



**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Fleece lined collar. High collar with zipper. With buttons for attachment of hood (sold separately, 2168). Adjustable with drawstrings in waistline. Removable ID-pocket for flame retardant clothes. **POCKETS:** Chest pocket with flap. Chest pocket with phone pocket. Chest pockets. Front pockets with flap. Inset pocket with flap. Inner pocket with velcro closure. **FRONT CLOSURE:** Robust hidden two-way metal zipper. Wind flap with velcro. **REFLEX:** Flame resistant reflective tapes sewn with double seams. **FINISH:** Extended back. Inner wristlet at sleeve end. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN ISO 20471, Class 3. Certified according to EN 342 when used with art: 1868. EN 343, Class 4.1. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E3, F1. ATPV - 34cal/cm<sup>2</sup>. ELIM - 30 cal/cm<sup>2</sup>. IEC 61482-2, APC 2.



MATCHES 4068,  
4468 AND 6368



## 2168

MULTINORM HOOD

**1530** 55% modacrylic, 43% cotton, 2% antistatic, twill, flame resistant, antistatic, laminated, wind- and waterproof, breathable, 300g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
One size



**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Oil, dirt and water repellent. Article 4468, 4068, 6368. **REFLEX:** Reflective detail on hood.



## FEAR NO ELEMENT

# THE ULTIMATE WINTER COLLECTION

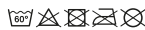
Work unhindered with the ultimate Multinorm collection for winter. A collection of flame resistant clothing built from scratch, with more than 60 years of experience behind each decision, ensuring your safety and comfort, whatever the weather. The new materials have been carefully tested with test pilots and work together to make the most durable, comfortable, warm and safe clothing ever.

Tackle those dark, demanding winter months with the complete Multinorm collection. Reflective tape, well-considered details, smart engineering and a modern design for first-class function and a professional look.

MULTINORM ULTIMATE WINTER garments are certified to IEC 61482-2: APC 2, ELIM 33 cal/cm<sup>2</sup> and ATPV 39 cal/cm<sup>2</sup>. EN 1149, EN ISO 11612, EN ISO 11611, EN 13034, EN ISO 20471 and EN 14404. EN 343 4/1 – Water column rating: 12,000 mm.



4917



NEW!

### 4517

MULTINORM WINTER JACKET

**1534** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, ripstop, flame resistant, antistatic, laminated, waterproof 12000 mm, windproof, breathable Ret 8,15, 290 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Dark colour field in high grime-exposure sections. Metal-free. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of gas detector/oxygen meter/microphone. Plastic snaps. High collar with covered zipper. Inside of collar in contrasting colour. With buttons for attachment of hood (sold separately, 2167). ID-kortsficka säljes separat. Good surface for transfer. **POCKETS:** Chest pockets with zipper and D-ring. Inner document pocket. Bellowed front pockets. Front pockets with zipper, fleece-lined. Inner pockets, one with zipper. **FRONT CLOSURE:** Front closure with push buttons. Robust hidden two-way plastic zipper. **REFLEX:** Reflective details on shoulder. Segmented flame resistant transfer reflective tape. **FINISH:** Adjustable hem with drawstring. Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro and wristlet. **CERTIFICATION:** ATPV- 39 cal/cm<sup>2</sup>. ELIM- 33cal/cm<sup>2</sup>. EN 61482-2, APC 2, EN 1149-5, EN 13034 PB [6]. Certified according to EN ISO 20471, XS-S Class 2, M-> Class 3. Certified according to EN 342 when used with art 1817. EN 343, Class 4,1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, C1, E3, F1.



NEW!

### 4917

MULTINORM WINTER JACKET WOMEN

**1534** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, ripstop, flame resistant, antistatic, laminated, waterproof 12000 mm, windproof, breathable Ret 8,15, 290 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-XXXL

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Dark colour field in high grime-exposure sections. Metal-free. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of microphone and other accessories. Plastic snaps. High collar with covered zipper. With buttons for attachment of hood (sold separately, 2167). Taped seams. D-ring. Good surface for transfer. **POCKETS:** Chest pockets with zipper and D-ring. Inner document pocket. Fleece-lined inset pocket with zipper. Inner pockets, one with zipper. **FRONT CLOSURE:** Front closure with push buttons. Robust hidden two-way plastic zipper. **REFLEX:** Reflective details on shoulder. Segmented flame resistant transfer reflective tape. **FINISH:** Adjustable hem with drawstring. Extended back. Adjustable sleeve end with velcro and wristlet. **CERTIFICATION:** ATPV- 39 cal/cm<sup>2</sup>. ELIM- 33cal/cm<sup>2</sup>. EN 61482-2, APC 2, EN 1149-5, EN 13034 PB [6]. EN ISO 20471, Class 2. EN ISO 20471, Class 3 together with 1817. Certified according to EN 342 when used with art 1817. EN 343, Class 4,1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, C1, E3, F1.

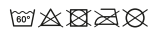




NEW!

**4527**

MULTINORM WINTER PARKA



**1534** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, ripstop, flame resistant, antistatic, laminated, waterproof 12000 mm, windproof, breathable Ret 8,15, 290 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

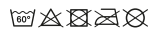
**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Dark colour field in high grime-exposure sections. Metal-free. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Loops placed on both sides of chest for placement of microphone and other accessories. Plastic snaps. High collar with covered zipper. With buttons for attachment of hood (sold separately, 2167). Adjustable with drawstrings in waistline. Taped seams. D-ring. Good surface for transfer. **POCKETS:** Chest pockets with zipper and D-ring. Inner document pocket. Front pockets with flap, with pockets from the side with zipper and fleece lining. **FRONT CLOSURE:** Robust hidden two-way plastic zipper. Wind flap with buttons. **REFLEX:** Reflective details on shoulder. Segmented flame resistant transfer reflective tape. **FINISH:** Extended back. Adjustable sleeve end with velcro and wristlet. **CERTIFICATION:** ATPV- 39 cal/cm<sup>2</sup>. ELIM- 33cal/cm<sup>2</sup>. EN 61482-2, APC 2. EN 1149-5. EN 13034 PB [6]. EN ISO 20471, Class 3. Certified according to EN 342 when used with art 1817. EN 343, Class 4, 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, C1, E3, F1.



NEW!

**2167**

MULTINORM WINTER HOOD



**1534** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, ripstop, flame resistant, antistatic, laminated, waterproof 12000 mm, windproof, breathable Ret 8,15, 290 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
S-XXL

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Metal-free. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** Taped seams. Plastic snaps. **REFLEX:** Segmented flame resistant transfer reflective tape. **SIZE EXPLANATION:** Size S fits model 4917 in size XS-M, size L fits model 4917 in size L-XL, size XXL fits model 4917 in size XXL-3XL. Size S fits the models 4517, 4527, 6317 in size XS-S, size L fits models 4517, 4527, 6317 in size M-XL, size XXL fits models 4517, 4527, 6317 in size 3XL-4XL.



NEW!

**1817**

MULTINORM WINTER BIB OVERALL



**1534** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, ripstop, flame resistant, antistatic, laminated, waterproof 12000 mm, windproof, breathable Ret 8,15, 290 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Metal-free. Oil, dirt and water repellent. **LINING:** Quilt lining. **DETAILS:** External certification labels. Plastic zipper fly. Straps. Plastic snaps. Elastic at waistline. Extended waistband back. Snow gaiter with velcro and button opening. Taped seams. D-ring. Adjustable and removable braces with elastic. **POCKETS:** Leg pocket with bellow and flap, with velcro closure and inner telephone pocket. Front pocket with fleece lining and flap. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REFLEX:** Segmented flame resistant transfer reflective tape. **FINISH:** Leg bottom with openable snow gaiter. Openable and adjustable leg end with zipper and velcro. **CERTIFICATION:** ATPV- 39 cal/cm<sup>2</sup>. ELIM- 33cal/cm<sup>2</sup>. EN 61482-2, APC 2. EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 2. Certified according to EN 342 when used with art 4517, 4527, 4917. EN 343, Class 4, 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, C1, E3, F1.



NEW!

**6317**

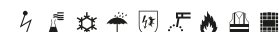
MULTINORM WINTER OVERALL



**1534** 44% modacrylic, 30% cotton, 20% polyamide, 5% aramide, 1% antistatic, ripstop, flame resistant, antistatic, laminated, waterproof 12000 mm, windproof, breathable Ret 8,15, 290 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Breathable wind & water-tight material, taped seams. Dark colour field in high grime-exposure sections. Metal-free. Oil, dirt and water repellent. Stretch panel in back. **LINING:** Quilt lining. **DETAILS:** Bellow on back. External certification labels. Plastic snaps. High collar with covered zipper. With buttons for attachment of hood (sold separately, 2167). Adjustable with drawstrings in waistline. Snow gaiter with velcro and button opening. Taped seams. D-ring. Good surface for transfer. **POCKETS:** Leg pocket with bellow and flap, with velcro closure and inner telephone pocket. Chest pockets with zipper. Front pockets with flap and push button. Front pockets with fleece lining. Inner pocket with zipper. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **FRONT CLOSURE:** Front closure with push buttons. Robust hidden two-way plastic zipper. **REINFORCEMENT:** Reinforced on knees and the lower back of trouser leg. **REFLEX:** Reflective details on shoulder. Segmented flame resistant transfer reflective tape. **FINISH:** Adjustable leg bottom with openable snow gaiter. Adjustable sleeve end with velcro and wristlet. **CERTIFICATION:** ATPV- 39 cal/cm<sup>2</sup>. ELIM- 33cal/cm<sup>2</sup>. EN 61482-2, APC 2. EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027 and 4057. EN ISO 20471, Class 3. EN 342. EN 343, Class 4, 1. Certified according to EN ISO 11611, Class 1 A1+A2. EN ISO 11612 A1, A2, C1, E3, F1.





# WELDING CL.2

## PROTECTION IN DEMANDING ENVIRONMENTS

Fabric 1501 is specially designed to meet the high safety requirements of demanding environments in which welding is performed.

The fabric is certified to EN 1149-3, EN 61482-1-2 Class 1, EN 61482-1-1 ATPV: 19,0 cal/cm<sup>2</sup>, Elim: 13,0 cal/cm<sup>2</sup>, EN ISO 11611 Class 2, EN ISO 11612 A1 A2 B1 C1 E3 F1.

We recommend professional industrial laundering for extended garment life. The reflectors are designed to withstand heavy-duty use and industrial laundering. If the garment is not laundered professionally, follow the care instructions. Softener or detergents with bleach should not be used.

Quality 1501 is tested and approved after 50 industrial washes according to: EN ISO 11612 (A1, B1, C1) och EN 1149-3.



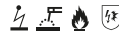
## 4801

WELDING JACKET



**1501** 79% cotton, 20% polyester, 1% antistatic satin, flame resistant antistatic 450g/m<sup>2</sup>  
**8933** Navy blue/Hi-vis yellow  
 XS-4XL

**DETAILS:** External certification labels. Adjustable collar width. High collar. D-ring. **POCKETS:** Front pockets with flap and push button. **FRONT CLOSURE:** Front cover with hidden metal push buttons. Hidden one-way metal zipper. **REFLEX:** Reflective details. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN ISO 11611 class 2, A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1, ELIM = 13cal/cm<sup>2</sup>, IEC 61482-2, APC 1.



## 1701

WELDING TROUSERS



**1501** 79% cotton, 20% polyester, 1% antistatic satin, flame resistant antistatic 450g/m<sup>2</sup>

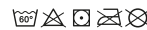
**8933** Navy blue/Hi-vis yellow  
 30R-48R, 32L-40L, 36S-51S

**DETAILS:** External certification labels. Metal zipper fly. Straps. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pocket with flap, hidden metal button. Leg pocket with flap. Outer knee protection pocket. Side pockets. Ruler pocket with knife holder. **REFLEX:** Reflective details. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032. EN ISO 11611 class 2, A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1, ELIM = 13cal/cm<sup>2</sup>, IEC 61482-2, APC 1.



## 3061

WELDING APRON



**1501** 79% cotton, 20% polyester, 1% antistatic satin, flame resistant antistatic 450g/m<sup>2</sup>

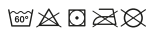
**8900** Navy blue  
 One size

**FUNCTIONALITY:** Reinforcing materials withstand melted metals, iron, zinc and aluminum. **DETAILS:** External labels. Tie belt. **CERTIFICATION:** EN ISO 11611 class 2, A1+A2, EN ISO 11612 A1, A2, B1, C1, D3, E3, F1.



## 2601

WELDING BIB TROUSERS



**1501** 79% cotton, 20% polyester, 1% antistatic satin, flame resistant antistatic 450g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
 32R-48R, 36S-47S

**DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Adjustable waistline. Adjustable braces with elastic. **POCKETS:** Chest pocket with flap and covered push buttons. Inset pockets with side openings. Outer knee protection pocket. Reinforced ruler pocket with knife holder and pen pocket. **REFLEX:** Reflective detail on calf. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032. EN ISO 11611 class 2, A1+A2, EN ISO 11612 A1, A2, B1, C1, E3, F1, ELIM = 13cal/cm<sup>2</sup>, IEC 61482-2, APC 1.







## 2068

### WELDING CAP



**1504** 98% cotton, 2% antistatic, flame resistant, antistatic, 230 g/m<sup>2</sup>

**9900** Black  
S-L

**FUNCTIONALITY:** Used under helmet. **DETAILS:** External certification labels. **MEASUREMENTS:** L = 60-62cm, M = 57-59cm, S = 54-56cm. **CERTIFICATION:** EN 1149-5, EN ISO 14116, index 3.



## 2840

### HEAT PROTECTION GLOVES

**1461** Split cowhide  
**7598** Brown/Dark grey  
8-11

**LINING:** Lined. **DETAILS:** Extended cuff in split leather. Seams in aramid thread. **PALM:** Split cow hide. **UPPER HAND:** Split cow hide. **PACKAGING:** Price/pair. Sold in bundles of 6 pairs.. 60 pair/box. **AREA OF USE:** Dirty environments. Hot environments. For mining. Heavy duty work. **CERTIFICATION:** EN 388 (3244X) PPE cat 2, EN 407 413X4X.



## 2839

### WELDING GLOVES

**1460** Full grain goatskin  
**1098** White/Dark grey  
7-12

**LINING:** Unlined. **DETAILS:** Extended cuff in split leather. Seams in aramid thread. **PALM:** Palm in goatskin. **UPPER HAND:** Goat grain. **PACKAGING:** Price/pair. Sold in bundles of 6 pairs.. 72 pair/box. **AREA OF USE:** Dirty environments. Hot environments. Precision work. TIG-welding. **CERTIFICATION:** EN 388 (2122X) PPE cat 2, EN 407 41224X, EN 12477 Type B.





# FLAME

## FOR SAFETY AND COMFORT

The new 1516 fabric is a flame-retardant material designed for durability and comfort. The cotton-rich fabric ensures wearability and maximum protection in one.

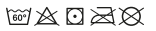
The fabric is certified to EN 1149-3, EN61482-1-1 ATPV: 16.0 cal/cm<sup>2</sup>, HAF 82%, EN 61482-1-2 Class 1, EN ISO 11611 Class 1, EN ISO 11612 A1 B1 C1 E1 F1, EN 13034.

We recommend professional industrial laundering for extended garment life. The reflectors are designed to withstand heavy-duty use and industrial laundering. If the garment is not laundered professionally, follow the care instructions. Softener or detergents with bleach should not be used.

Quality 1516 is tested and approved after 50 industrial washes according to: EN ISO 11612 (A1, B1, C1) och EN 1149-3.



4071



## 4061

### ANTI-FLAME JACKET

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**9994** Black/Grey

XS-4XL

**FUNCTIONALITY:** Oil, dirt and water repellent. Pre-bent sleeves. **DETAILS:** Bellow on back. External certification labels. High collar with covered zipper. **POCKETS:** Chest pockets with covered zipper. Inset pocket with flap. Inner pockets. Inner telephone pocket. **FRONT CLOSURE:** Robust hidden one-way metal zipper. **REFLEX:** Reflective details. **FINISH:** Adjustable hem with velcro. Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.



## 1461

### FLAME RESISTANT CRAFTSMAN TROUSERS

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

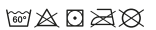
**9994** Black/Grey

30R-48R, 32L-40L, 32S-49S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with bellow. Leg pocket with bellow, flap and pen pocket, extra pocket and telephone pocket. Inset pockets. Inner knee protection pockets. Reinforced, three-compartment nail pockets on front. **REFLEX:** Reflective details. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, class 1. ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.



7173



## 1561

### ANTI-FLAME TROUSERS

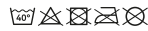
**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>

**9994** Black/Grey

30R-48R, 32L-40L, 32S-51S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Woven label on leg pocket. Metal zipper fly. Loops, one with D ring. Removable ID-pocket for flame retardant clothes. **POCKETS:** Back pockets with flap. Leg pocket with bellow and flap. Inset pocket with flap. Inner knee protection pockets. Ruler pocket with knife holder and pen pocket. **REFLEX:** Reflective details. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.



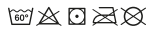
**4961****ANTI-FLAME WINTER JACKET**

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**9994** Black/Grey  
 XS-4XL

**FUNCTIONALITY:** Lined. Oil, dirt and water repellent. **LINING:** Lined. **DETAILS:** Bellow on back. External certification labels. High collar with covered zipper. **POCKETS:** Chest pockets with zipper. Inset pocket with flap. Inner telephone pocket. **FRONT CLOSURE:** Robust hidden one-way metal zipper. **REFLEX:** Reflective details. **FINISH:** Adjustable hem with velcro. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 342 together with 1869-1514, EN ISO 11611, Class 1 A1, EN ISO 11612 A1, B1, C1, E1, F1, IEC 61482-2, class 2.



USE WITH 4039 ANTI-FLAME BELT

**1516****LOOSE NAIL POCKETS**

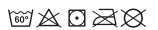
**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**9900** Black  
 One size

**FUNCTIONALITY:** Oil, dirt and water repellent. To be attached to belt. **POCKETS:** Nail pockets - in three parts and extra wide. **PACKAGING:** Sold in pairs. **FITS WITH:** Blåkläders trouser without nailpockets. Belt 4039.

**2861****ANTI-FLAME BIB TROUSERS**

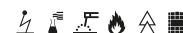
**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**9994** Black/Grey  
 30R-48R, 32L-40L, 36S-51S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** External certification labels. Metal zipper fly. Loops, one with D ring. Adjustable waistline. Removable ID-pocket for flame retardant clothes. Adjustable braces with elastic. **POCKETS:** Back pockets with flap, hidden with metal buttons. Leg pocket with bellow and flap. Chest pocket with flap. Two front pockets. Inner knee protection pockets. Ruler pocket with knife holder and pen pocket. **REFLEX:** Reflective details. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6], EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032, EN ISO 11611, Class 1 A1, EN ISO 11612 A1, B1, C1, E1, F1, IEC 61482-2, class 1, ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.

**6061****ANTI-FLAME OVERALL**

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**9994** Black/Grey  
 30R-48R, 32L-40L, 36S-51S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Bellow on back. External certification labels. Adjustable elastic in waistline. **POCKETS:** Back pockets with bellow and flap. Leg pocket with flap and extra tool pocket. Chest pockets with zipper. Chest pockets with flap. Inset pocket with flap. Inner knee protection pockets. Ruler pocket with extra pocket. **FRONT CLOSURE:** Robust hidden two-way metal zipper. **REFLEX:** Reflective details. **FINISH:** Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 type 6, EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032, EN ISO 11611, Class 1 A1, EN ISO 11612 A1, B1, C1, E1, F1, IEC 61482-2, class 1, ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.





# FLAME

## DURABLE, SAFE AND COMFORTABLE

The 1516 fabric is a flame retardant material designed for durability and comfort. The cotton-rich fabric ensures wearability and maximum protection in one.

The fabric is certified to EN 1149-3, EN 61842-1-1 APTV:16,0 cal/cm<sup>2</sup>, HAF:82%, EN 61482-1-2 Class 1, EN ISO 11611 Class 1, EN ISO 11612, A1, A2, B1, C1, E3, F1, EN 13034.

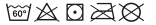
We recommend professional industrial laundering for extended garment life. If the garment is not laundered professionally, follow the care instructions. Softener or detergents with bleach should not be used.

Quality 1516 is tested and approved after 50 industrial washes according to: EN ISO 11612 (A1, B1, C1) och EN 1149-3.



## 4774

ANTI-FLAME JACKET



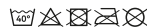
**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**8900** Navy blue  
 XS-4XL

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Bellow on back. External certification labels. **POCKETS:** Chest pocket with D ring. Chest pockets with flap. Inset pocket with flap. **FRONT CLOSURE:** Hidden one-way metal zipper. **FINISH:** Adjustable hem with velcro. Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.



## 4784

FLAME RESISTANT WINTER JACKET



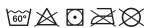
**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**8900** Navy blue  
 XS-4XL

**FUNCTIONALITY:** Lined. Oil, dirt and water repellent. Pre-bent sleeves. **DETAILS:** Bellow on back. External certification labels. High collar with covered zipper. Yoke in back. **POCKETS:** Chest pockets with covered zipper. Inset pocket with flap. Inner pocket. **FRONT CLOSURE:** Robust hidden one-way metal zipper. **FINISH:** Adjustable hem with velcro. Extended back. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. EN 342 together with 1869-1514. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 2.



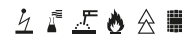
## 1724

ANTI-FLAME TROUSERS



**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**8900** Navy blue  
 30R-48R, 32L-40L, 32S-51S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Metal zipper fly. Straps. **POCKETS:** Back pockets with flap and button closure. Leg pocket with bellow, flap and sewn on three-section pen pocket. Front pockets with flap. Outer knee protection pocket. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.



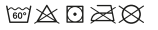


## 6704

### ANTI-FLAME OVERALL

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**8900** Navy blue  
 30R-48R

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Bellow on back. Adjustable elastic in waistline. **POCKETS:** Back pockets with flap. Chest pocket with D ring. Chest pockets with flap. Front pockets with flap and push button. Ruler pocket. Sleeve pocket with flap. **FRONT CLOSURE:** Hidden button closure with metal buttons. **FINISH:** Adjustable sleeve end with velcro. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.

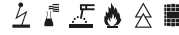


## 2824

### ANTI-FLAME BIB TROUSERS

**1516** 85% cotton, 14% polyester, 1% antistatic, twill, flame resistant antistatic, 350g/m<sup>2</sup>  
**8900** Navy blue  
 32R-48R, 34S-47S

**FUNCTIONALITY:** Oil, dirt and water repellent. **DETAILS:** Metal zipper fly. Straps. Adjustable waistline. D-ring. Adjustable braces with elastic. **POCKETS:** Back pockets with flap and button closure. Leg pocket with bellow and flap. Chest pocket with flap. Inset pockets. Outer knee protection pocket. Ruler pocket with knife holder. **FINISH:** C sizes can be extended to C100 sizes. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5. EN 13034 PB [6]. EN 14404:2004+A1:2010 together with knee protection 4027, 4057, 4058 and 4032. EN ISO 11611, Class 1 A1. EN ISO 11612 A1, B1, C1, E1, F1. IEC 61482-2, class 1. ATPV: 16,0 cal/cm<sup>2</sup>, HAF: 82,0%.





4313

FLAME RESISTANT RAINCOAT LEVEL 2

**2022** 67% polyester, 33% cotton, PVC-coated, wind- and waterproof, flame resistant, antistatic, 390 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Wind and waterproof with welded seams. **DETAILS:** Hidden buttons. Plastic snaps. Fleece lined collar. High collar with zipper. Hood adapted for helmet and hearing protection. Removable, adjustable hood. Welded seams. D-ring. Printed reflector. **POCKETS:** Front pockets with flap. Napoleon pocket inside front wind flap. **FRONT CLOSURE:** Robust hidden two-way plastic zipper. Storm closure with buttons. **REFLEX:** Printed reflective tape. **FINISH:** Adjustable sleeve end with velcro. Cuff with elastic band. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 3, EN 343, Class 4, 1, EN ISO 14116, index 3, IEC 61482-2, APC 1.



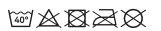
4303

FLAME RESISTANT RAINJACKET

**2009** 100% polyester, PU coated, wind- and waterproof, breathable, flame-resistant, 260g/m<sup>2</sup>

**3300** Hi-vis yellow  
XS-XXXL

**FUNCTIONALITY:** Ventilation in back. Wind and waterproof with welded seams. **DETAILS:** Removable, adjustable hood. Retractable ID-pocket. **POCKETS:** Front pockets with zipper. Front pockets, one with D ring. Napoleon pocket inside front wind flap. **FRONT CLOSURE:** Hidden one-way plastic zipper. **FINISH:** Adjustable sleeve end with inner cuff. Adjustable sleeve end with velcro. **CERTIFICATION:** EN 13034 PB [6], EN ISO 20471, Class 3, EN 343, Class 3.1, EN ISO 14116, index 1.



1313

FLAME RESISTANT RAIN TROUSERS LEVEL 2

**2022** 67% polyester, 33% cotton, PVC-coated, wind- and waterproof, flame resistant, antistatic, 390 g/m<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Wind and waterproof with welded seams. **DETAILS:** Straps. Plastic snaps. Elastic and drawstring at waistline. Welded seams. Printed reflector. Adjustable and removable braces with elastic. **POCKETS:** Leg pocket with bellow and flap. Opening with flap to enable hanging out the nail pockets. **REFLEX:** Printed reflective tape. **FINISH:** Adjustable leg bottom with buttons. Adjustable leg bottom with velcro. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 2, EN 343, Class 4, 1, EN ISO 14116, index 3, IEC 61482-2, APC 1.



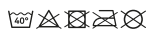
1303

FLAME RESISTANT RAIN TROUSERS

**2009** 100% polyester, PU coated, wind- and waterproof, breathable, flame-resistant, 260g/m<sup>2</sup>

**3300** Hi-vis yellow  
XS-XXXL

**FUNCTIONALITY:** Wind and waterproof with welded seams. **DETAILS:** Adjustable with drawstrings in waistline. Adjustable and removable braces with elastic. **POCKETS:** Leg pocket with bellow and flap. Opening with flap to enable hanging out the nail pockets. Ruler pocket with extra pocket and knife holder. **REINFORCEMENT:** Reinforced knees. **FINISH:** Adjustable leg bottom with velcro. Leg end with zipper. **CERTIFICATION:** EN 13034 PB [6], EN ISO 20471, Class 2, EN 343, Class 3, 1, EN ISO 14116, index 1.





3034

## MULTINORM SAFETY WAISTCOAT

**1729** 98% polyester, 2% antistatic fibre, warp knitted, flame resistant, antistatic, 120 g/m<sup>2</sup>

**3300** Hi-vis yellow, **5300** Orange  
S/M, L/XL, XXL/3XL

**DETAILS:** External labels. D-ring. ID-kortsicka säljes separat. **POCKETS:** Openings in the side for access to underlying garment pockets. **FRONT CLOSURE:** One-way plastic zipper. **REFLEX:** 50 mm wide flame resistant reflective tape. **FINISH:** Extended back. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 3, EN ISO 14116, index 1.



3480

## MULTINORM T-SHIRT

**1761** 48% modacrylic, 42% cotton, 5% Aramid, 3% polyamide, 2% antistatic fibre, interlock, flame resistant, antistatic, 250 g/m<sup>2</sup>

**3300** Hi-vis yellow  
XS-4XL

**DETAILS:** External certification labels. Round neck. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 2, EN ISO 14116, index 3.



3439

## MULTINORM PIQUE LONG SLEEVED

**1726** 59% modacrylic, 39% cotton, 2% antistatic, pique knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 6,3 cal/cm<sup>2</sup>

**3300** Hi-vis yellow  
S-4XL

**DETAILS:** External certification labels. Neck opening with buttons. Rib-knitted collar. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 3, ISO 11612 A1, B1, C1, IEC 61482-2, class 1, ATPV: 6,3 cal/cm<sup>2</sup>, HAF: 73,0%.



NEW!

3481

## MULTINORM LONG SLEEVED T-SHIRT

**1761** 48% modacrylic, 42% cotton, 5% Aramid, 3% polyamide, 2% antistatic fibre, interlock, flame resistant, antistatic, 250 g/m<sup>2</sup>

**3300** Hi-vis yellow  
S-6XL

**DETAILS:** External certification labels. Cuffed neck. Round neck. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 3, EN ISO 11612 A1, B1, C1, E1, F1, IEC 61482-2, APC 1, ATPV - 13,1 cal/cm<sup>2</sup>.



3087

## MULTINORM SWEATSHIRT

**1762** 60% Modacrylic, 39% cotton, 1% antistatic fibre, fleece, flame resistant, antistatic, 280g/m<sup>2</sup>

**3300** Hi-vis yellow  
XS-6XL

**DETAILS:** External certification labels. Cuffed neck. Round neck. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Ribbed hem. Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, EN ISO 20471 class 2 XS-S, class 3 M -->. ISO 11612 A1, B1, C2, EBT - 13 cal/cm<sup>2</sup>, ELIM - 12cal/cm<sup>2</sup>, IEC 61482-2, APC 1.





3494



## 3484

### FLAME RESISTANT LONG SLEEVE T-SHIRT

**1761** 48% modacrylic, 42% cotton, 5% Aramid, 3% polyamide, 2% antistatic fibre, interlock, flame resistant, antistatic, 250 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-4XL

**DETAILS:** External certification labels. Round neck. Vent on side. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 1. IEC 61482-2, APC 1. ATPV - 13,1 cal/cm<sup>2</sup>. EN ISO 11612 A1, B1, C1, E1, F1.



## 3459

### MULTINORM SWEATSHIRT

**1762** 60% Modacrylic, 39% cotton, 1% antistatic fibre, fleece, flame resistant, antistatic, 280g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-4XL

**DETAILS:** External certification labels. Cuffed neck. Round neck. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Ribbed hem. Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 1. ISO 11612 A1, B1, C2, EBT - 13 cal/cm<sup>2</sup>. ELIM - 12cal/cm<sup>2</sup>. IEC 61482-2, APC 1.



## 3494

### FLAME RESISTANT LONG SLEEVED WOMEN'S T-SHIRT

**1761** 48% modacrylic, 42% cotton, 5% Aramid, 3% polyamide, 2% antistatic fibre, interlock, flame resistant, antistatic, 250 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-XXXL

**DETAILS:** External certification labels. Round neck. Vent on side. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 1. IEC 61482-2, APC 1. ATPV - 13,1 cal/cm<sup>2</sup>. EN ISO 11612 A1, B1, C1, E1, F1.



## 3438

### MULTINORM PIQUE LONG SLEEVED

**1726** 59% modacrylic, 39% cotton, 2% antistatic, pique knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 6,3 cal/cm<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-4XL

**DETAILS:** External certification labels. Neck opening with buttons. Rib-knitted collar. **REFLEX:** 50 mm wide flame resistant cut reflective tapes. Printed reflective tape. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, EN ISO 20471, Class 1. ISO 11612 A1, B1, C1. IEC 61482-2, class 1. ATPV: 6,3 cal/cm<sup>2</sup>, HAF: 73,0%.





**3229**

## MULTINORM SHIRT



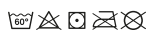
**1517** 50% modacrylic, 32% cotton 10% Aramid, 5% polyamide, 3% antistatic, ripstop, flame resistant, antistatic, 200g/cm<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-6XL

**FUNCTIONALITY:** Metal-free. **DETAILS:** External certification labels. Plastic snaps. Shirt collar. **POCKETS:** Chest pocket with flap and covered push buttons, one pocket with pen opening. **REFLEX:** 50 mm wide cut reflective tape. Printed reflective tape. **FINISH:** Adjustable sleeve end with hidden push buttons in plastic. **CERTIFICATION:** EN 1149-5. EN ISO 20471, Class 1. EN ISO 11612 A1, A2, B1, C1. IEC 61482-2, APC 1. ATPV - 8,1 cal/cm<sup>2</sup>. ELIM - 6,3 cal/cm<sup>2</sup>.

**3239**

## MULTINORM SHIRT



**1517** 50% modacrylic, 32% cotton 10% Aramid, 5% polyamide, 3% antistatic, ripstop, flame resistant, antistatic, 200g/cm<sup>2</sup>

**3389** Hi-vis yellow/navy blue  
XS-4XL

**FUNCTIONALITY:** Metal-free. **DETAILS:** External certification labels. Plastic snaps. Shirt collar. **POCKETS:** Chest pocket with flap and covered push buttons, one pocket with pen opening. **REFLEX:** 50 mm wide cut reflective tape. Printed reflective tape. **FINISH:** Adjustable sleeve end with hidden push buttons in plastic. **CERTIFICATION:** EN 1149-5. Certified according to EN ISO 20471, XS-S Class 2, M-> Class 3. EN ISO 11612 A1, A2, B1, C1. IEC 61482-2, APC 1. ATPV - 8,1 cal/cm<sup>2</sup>. ELIM - 6,3 cal/cm<sup>2</sup>.

**3457**

## FLAME RESISTANT LONG-SLEEVE T-SHIRT



**1761** 48% modacrylic, 42% cotton, 5% Aramid, 3% polyamide, 2% antistatic fibre, interlock, flame resistant, antistatic, 250 g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-4XL

**DETAILS:** External certification labels. Cuffed neck. Vent on side. **FINISH:** Rib-knit sleeve. **CERTIFICATION:** EN 1149-5. IEC 61482-2, APC 1. ATPV - 13,1 cal/cm<sup>2</sup>. EN ISO 11612 A1, B1, C1, E1, F1.

**3458**

## FLAME RESISTANT SWEATSHIRT



**1762** 60% Modacrylic, 39% cotton, 1% antistatic fibre, fleece, flame resistant, antistatic, 280g/m<sup>2</sup>

**8933** Navy blue/Hi-vis yellow  
XS-4XL

**DETAILS:** External certification labels. Round neck. **FINISH:** Ribbed hem. Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5. ISO 11612 A1, B1, C2. EBT - 13 cal/cm<sup>2</sup>. ELIM - 12cal/cm<sup>2</sup>. IEC 61482-2, APC 1.





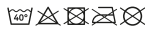
3482

FLAME RESISTANT T-SHIRT

**1737** 60% modacrylic, 39% cotton, 1% Antistatic fibre, single jersey, flame resistant, antistatic 210g/m<sup>2</sup>

**8900** Navy blue, **9900** Black  
XS-4XL

**DETAILS:** External certification labels. Round neck. **CERTIFICATION:** EN 1149-5, EN ISO 14116, index 3.



3483

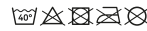
FLAME RESISTANT LONG-SLEEVE T-SHIRT

**1737** 60% modacrylic, 39% cotton, 1% Antistatic fibre, single jersey, flame resistant, antistatic 210g/m<sup>2</sup>

**9900** Black  
XS-4XL

**8900** Navy blue  
XS-6XL

**DETAILS:** External certification labels. Round neck. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, IEC 61482-2, APC 1, EBT - 6,4 cal/cm<sup>2</sup>, ISO 11612 A1, B1, C1.



3074

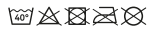
MULTINORM SWEATSHIRT

**1762** 60% Modacrylic, 39% cotton, 1% antistatic fibre, fleece, flame resistant, antistatic, 280g/m<sup>2</sup>

**9900** Black  
XS-4XL

**8900** Navy blue  
XS-6XL

**DETAILS:** External certification labels. Cuffed neck. Round neck. **FINISH:** Ribbed hem. Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, ISO 11612 A1, B1, C2, EBT - 13 cal/cm<sup>2</sup>, ELIM - 12 cal/cm<sup>2</sup>, IEC 61482-2, APC 1.



3374

FLAME RESISTANT PIQUE LONG SLEEVED

**1726** 59% modacrylic, 39% cotton, 2% antistatic, pique knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 6,3 cal/cm<sup>2</sup>

**8900** Navy blue, **9900** Black  
XS-4XL

**DETAILS:** External certification labels. Neck opening with buttons. Rib-knitted collar. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, ISO 11612 A1, B1, C1, IEC 61482-2, class 1, ATPV: 6,3 cal/cm<sup>2</sup>, HAF: 73,0%.



3227

FLAME SHIRT

**1515** 54% modacrylic, 44% cotton, 2% antistatic, twill, flame resistant, antistatic, 180 g/m<sup>2</sup>

**8900** Navy blue  
XS-4XL

**DETAILS:** External certification labels. Shirt collar. **POCKETS:** Chest pockets with flap and button closure. **FRONT CLOSURE:** Front cover with hidden metal push buttons. **FINISH:** Adjustable sleeve end with hidden metal buttons. **CERTIFICATION:** EN 1149-5, EN ISO 11612 A1, A2, B1, C1, F1, IEC 61482-2, APC 1, EBT - 6,4 cal/cm<sup>2</sup>.



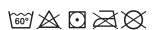
3226

FLAME RESISTANT SHIRT

**1504** 98% cotton, 2% antistatic, flame resistant, antistatic, 230 g/m<sup>2</sup>

**8900** Navy blue, **9900** Black  
XS-6XL

**DETAILS:** External certification labels. Shirt collar. **POCKETS:** Chest pocket with flap and covered push buttons, one pocket with pen opening. **FRONT CLOSURE:** Front cover with hidden metal push buttons. **FINISH:** Adjustable sleeve end with hidden metal buttons. **SIZE EXPLANATION:** The product has an extended size arc. **WASH:** Industry laundry EN ISO 15797. **CERTIFICATION:** EN 1149-5, EN ISO 11612 A1, A2, B1, C1, E1, IEC 61482-2, class 1.





4793

## FLAME RESISTANT WOOL JACKET

**1077** 79% wool, 19% modacrylic, 2% antistatic, Merino wool, terry knit, flame resistant, antistatic, 390 g/m<sup>2</sup>

**9900** Black  
XS-4XL

**FUNCTIONALITY:** Metal-free. **DETAILS:** External certification labels. High collar with covered zipper. **FRONT CLOSURE:** Hidden one-way plastic zipper. **FINISH:** Bottom hem adjustable with elastic band. Extended back. Extended cuff with thumb hole and elasticated hem. **CERTIFICATION:** EN 1149-5. EN ISO 11612 A1, B2, C2, F2. ELIM - 6,2 cal/cm<sup>2</sup>. IEC 61482-2, APC 1. EBT - 6,4 cal/cm<sup>2</sup>.



1878

## WOOL LONG JOHNS FLAME

**1077** 79% wool, 19% modacrylic, 2% antistatic, Merino wool, terry knit, flame resistant, antistatic, 390 g/m<sup>2</sup>

**9900** Black  
XS-4XL

**DETAILS:** External certification labels. Elastic at waistline. **FINISH:** Cuffed trouser bottom. **CERTIFICATION:** EN 1149-5. EN ISO 11612 A1, B2, C2, F2. ELIM - 6,2 cal/cm<sup>2</sup>. IEC 61482-2, APC 1. EBT - 6,4 cal/cm<sup>2</sup>.



7213

4794

## FLAME RESISTANT UNDERWEAR TOP, 68% MERINO WOOL

**1075** 68% wool, 30% modacrylic, 2% antistatic, merino interlock, flame resistant, 225 g/m<sup>2</sup>

**9900** Black  
XS-4XL

**DETAILS:** External certification labels. Round neck. Seams in contrasting colour. **FINISH:** Extended back. Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5. ISO 11612 A1, B1, C1. ELIM - 6,2 cal/cm<sup>2</sup>. IEC 61482-2, APC 1. EBT - 7,3 cal/cm<sup>2</sup>.



4796

## FLAME RESISTANT UNDERWEAR TOP HALF ZIP, 68% MERINO WOOL

**1075** 68% wool, 30% modacrylic, 2% antistatic, merino interlock, flame resistant, 225 g/m<sup>2</sup>

**9900** Black  
XS-4XL

**DETAILS:** External certification labels. High collar with covered zipper. Seams in contrasting colour. **FINISH:** Extended back. Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5. ISO 11612 A1, B1, C1. ELIM - 6,2 cal/cm<sup>2</sup>. IEC 61482-2, APC 1. EBT - 7,3 cal/cm<sup>2</sup>.



7203

1889

## FLAME RESISTANT LONG UNDERWEAR, 68% MERINO WOOL

**1075** 68% wool, 30% modacrylic, 2% antistatic, merino interlock, flame resistant, 225 g/m<sup>2</sup>

**9900** Black  
XS-4XL

**DETAILS:** External certification labels. Elastic at waistline. Seams in contrasting colour. **FINISH:** Cuffed trouser bottom. **CERTIFICATION:** EN 1149-5. ISO 11612 A1, B1, C1. ELIM - 6,2 cal/cm<sup>2</sup>. IEC 61482-2, APC 1. EBT - 7,3 cal/cm<sup>2</sup>.





3498

## FLAME RESISTANT UNDERWEAR TOP

**1725** 59% modacrylic, 39% cotton, 2% antistatic, rib knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 4,44 cal/cm<sup>2</sup>.

**9900** Black  
XS-4XL

**DETAILS:** Cuffed neck, Round neck. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, ISO 11612 A1, B1, C1. Arc rating: 4,4 cal/cm<sup>2</sup>. IEC 61482-2, class 1.



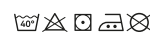
4898

## FLAME RESISTANT UNDERWEAR TOP HALF ZIP

**1725** 59% modacrylic, 39% cotton, 2% antistatic, rib knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 4,44 cal/cm<sup>2</sup>.

**9900** Black  
XS-4XL

**DETAILS:** High collar with covered zipper. **FINISH:** Wristlet at sleeve end. **CERTIFICATION:** EN 1149-5, ISO 11612 A1, B1, C1. Arc rating: 4,4 cal/cm<sup>2</sup>. IEC 61482-2, class 1.



1898

## FLAME RESISTANT UNDERWEAR TROUSERS

**1725** 59% modacrylic, 39% cotton, 2% antistatic, rib knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 4,44 cal/cm<sup>2</sup>.

**9900** Black  
XS-4XL

**DETAILS:** Fly, Elastic at waistline. **FINISH:** Cuffed trouser bottom. **CERTIFICATION:** EN 1149-5, ISO 11612 A1, B1, C1. Arc rating: 4,4 cal/cm<sup>2</sup>. IEC 61482-2, class 1.



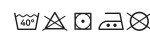
1828

## FLAME RESISTANT BOXER SHORTS

**1725** 59% modacrylic, 39% cotton, 2% antistatic, rib knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 4,44 cal/cm<sup>2</sup>.

**9900** Black  
XS-4XL

**DETAILS:** Fly, Elastic at waistline. **CERTIFICATION:** EN 1149-5, EN ISO 14116, index 3.





2055

BALACLAVA INHERENT



**1760** 59% modacrylic, 39% cotton, 2% antistatic, Royal Rib antistatic Flame resistant 310 g/ m<sup>2</sup>, Arc Rating 14,8 cal/cm<sup>2</sup>.

**8900** Navy blue  
One size

**FUNCTIONALITY:** One size. **DETAILS:** Can be used under the helmet.  
**CERTIFICATION:** EN 1149-5. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, class 1.



2043

NECK PROTECTION INHERENT



**1760** 59% modacrylic, 39% cotton, 2% antistatic, Royal Rib antistatic Flame resistant 310 g/ m<sup>2</sup>, Arc Rating 14,8 cal/cm<sup>2</sup>.

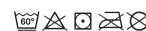
**8900** Navy blue  
One size

**FUNCTIONALITY:** Can be used as a cap, scarf or headband. One size.  
**CERTIFICATION:** EN 1149-5. EN ISO 11612 A1, B1, C1, F1. IEC 61482-2, class 1.



2227

FLAME RESISTANT SOCKS



**1728** 49% modacrylic, 29% cotton, 19% polyamide, 2% antistatic, 1% elastane, terry knit, flame resistant, antistatic.

**9900** Black  
2-5, 6-8, 9-11, 12-14

**FUNCTIONALITY:** Ankle length sock. **CERTIFICATION:** EN ISO 14116 index 2. EN 1149-5.



2038

FLAME RESISTANT BALACLAVA



**1725** 59% modacrylic, 39% cotton, 2% antistatic, rib knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 4,44 cal/cm<sup>2</sup>.

**9900** Black  
One size

**FUNCTIONALITY:** One size. **DETAILS:** Can be used under the helmet.  
**CERTIFICATION:** EN 1149-5. ISO 11612 A1, B1, C1. Arc rating: 4,4 cal/cm<sup>2</sup>. IEC 61482-2, class 1.



2036

FLAME RESISTANT COLLAR/BANDANA



**1725** 59% modacrylic, 39% cotton, 2% antistatic, rib knitted, flame resistant, antistatic, 220g/m<sup>2</sup>, Arc Rating 4,44 cal/cm<sup>2</sup>.

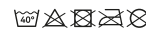
**9900** Black  
One size

**FUNCTIONALITY:** Can be used as a cap, scarf or headband.  
**CERTIFICATION:** EN 1149-5. ISO 11612 A1, B1, C1. Arc rating: 4,4 cal/cm<sup>2</sup>. IEC 61482-2, class 1.



2069

FLAME RESISTANT BEANIE



**1761** 48% modacrylic, 42% cotton, 5% Aramid, 3% polyamide, 2% antistatic fibre, interlock, flame resistant, antistatic, 250 g/m<sup>2</sup>

**3300** Hi-vis yellow, **8900** Navy blue  
One size

**DETAILS:** External certification labels. Can be used under the helmet.  
**CERTIFICATION:** EN 1149-5. EN ISO 14116, index 3.



2066

FLAME RESISTANT WOOL BEANIE



**1075** 68% wool, 30% modacrylic, 2% antistatic, merino interlock, flame resistant, 225 g/m<sup>2</sup>

**9900** Black  
One size

**DETAILS:** External certification labels.  
**CERTIFICATION:** EN 1149-5. EN ISO 14116, index 3.



2136

FLAME RESISTANT REINFORCEMENT TRANSFER

**9900** Black  
One size

**FUNCTIONALITY:** Reinforcement transfer for flame-resistant garments. **DETAILS:** 160–190°C, 5-6 bar, 30 seconds. **PACKAGING:** Sold in pairs.  
**MEASUREMENTS:** 16x23 cm.



2109

FLAME-RESISTANT ID-CARD POCKET

**1511** 65% cotton, 34% polyester, 1% antistatic, twill, flame resistant, antistatic, 350 g/m<sup>2</sup>

**9900** Black  
One size

**DETAILS:** Removable ID-pocket for flame retardant clothes.



4039

ANTI-FLAME BELT IN STRETCH



**9900** Black  
One size

**DETAILS:** Flame-retardant buckle with Blåkläder logo. Strong stretch material. **MEASUREMENTS:** Length 130 cm. Width 40 mm.

# CORRECT CHOICE OF CLOTHES STARTS INSIDE AND OUT

## DRESS IN MULTIPLE LAYERS FOR INCREASED PROTECTION

Materials and garments tested for IEC 61482-2 have evaluated protection against the extreme heat that develops in an arc accident. The standard sets the limit of necessary protection to avoid second-degree burns, you can use the stoll curve\* as a basis for evaluation.

The protection lies in the flame retardant properties of the garment and at what level the material takes up the heat energy discharged at an arc (this is stated in cal/cm<sup>2</sup>). The higher the ability of the material or material combination to absorb the energy, the higher the protective function of the garment.

A layer-on-layer system of arc certified garments gives the wearer increased protection in case of an accident. In addition to the fact that each layer itself offers protection, it is primarily the air gap between each layer that constitutes the main barrier to the thermal energy. Blaklader recommends a three-layer concept with outer bearing, intermediate bearing and closest to the body, a flame-retardant support should be worn to maximise protection against heat and reduce the risk of burns.

It is not possible to theoretically calculate the expected level of protection offered by a garment concept, but each unique material combination must be tested to get a relevant value. This is because even if you know the performance of each individual material, you cannot predict the effect and air gap between the layers will have. It is crucial how smooth, uneven or rigid, respectively, the materials are and how they work together.

\*) Stoll curve; The relationship between thermal energy and time that is the risk of second degree burn.



4793

+



4088

=

**Open Arc Test:**  
**EN 61482-1-1**

EBT = 43 cal/cm<sup>2</sup>ELIM = 27 cal/cm<sup>2</sup>



# THE LOOK OF AN ELECTRIC ARC

This is our winter jacket 4068-1530 with an result of ATPV 34 cal/cm<sup>2</sup> and ELIM 30 cal/cm<sup>2</sup>, when tested in accordance with EN 61482-1-1.

**ATPV-VALUE** The Arc Thermal Performance Value (ATPV) value indicates the amount of energy (cal/cm<sup>2</sup>) to which the material/garment can be exposed and still provide a 50% protection against the second degree's burn.

**EBT50-VALUE** The Energy Break Open Threshold (Ebt50) value indicates the amount of energy (cal/cm<sup>2</sup>) to which the material/garment may be exposed before a 50% risk of hole formation occurs. The hole in the material/garment must not exceed 1.6 cm<sup>2</sup>.

**ELIM-value** (Incident Energy limit). As a complement to the ATPV and EBT value, an add-on for the Open Arc test is about a level for the Incident Energy Limit, called ELIM. ELIM is the upper limit of thermal energy a material / garment can be exposed without risking the second degree of burn for the wearer or hole formation in the material. For ATPV and EBT, there is always a (50%) risk that the second degree's burn or hole may occur.

**HRC** HRC categories; Hazard Risk Category Level (derived from the US Standard of Electrical Safety NFPA 70E)

HRC 1: 4-8 cal/cm<sup>2</sup>                      HRC 3: 25-40 cal/cm<sup>2</sup>

HRC 2: 8-25 cal/cm<sup>2</sup>                    HRC 4: >40 cal/cm<sup>2</sup>

In the latest release of NFPA 70E, the HRC categories are referred to as PPE (Personal Protective Equipment) categories

**EN 61482-1-2** Box test: in this test, fabrics and garments are exposed to an electric arc confined in a box at a specific value. The arc current is 400 V and the duration is 500 ms. There are two classes for the test. The test gives a pass or fail result. Combinations of different garments or lined garments are often required to pass the box test Class 2.

	Electric arc	Time
Class 1/APC1	4kA – 168 kJ (400v)	500 ms
Class 2/APC2	7kA – 320 kJ (400v)	500 ms

Please check out the arc flash combination result on [www.blaklader.com](http://www.blaklader.com)

# COMBINE FOR BEST PROTECTION

## OPEN ARC EN 61482-1-1

47961075	47941075	72131075		+	40891512	49691512	=	ATPV = 32 cal/cm <sup>2</sup> ELIM = 25 cal/cm <sup>2</sup>
								
47961075	47941075	72131075		+	40871514		=	ATPV = 43,8 cal/cm <sup>2</sup> ELIM = 37 cal/cm <sup>2</sup>
								
	34981725	48981725		+	40891512	49691512	=	EBT = 31 cal/cm <sup>2</sup> ELIM = 23 cal/cm <sup>2</sup>
								
		32271515		+	40891512	49691512	=	EBT = 28,8 cal/cm <sup>2</sup> ELIM = 27 cal/cm <sup>2</sup>
								
34811761	34571761	34841761	34941761	+	40891512	49691512	=	ATPV = 28 cal/cm <sup>2</sup> ELIM = 25 cal/cm <sup>2</sup>
								
30741762	30871762	34581762	34591762	+	40891512	49691512	=	EBT = 34 cal/cm <sup>2</sup> ELIM = 33 cal/cm <sup>2</sup>
								
34811761	34571761	34841761	34941761	+	40871514		=	ATPV = 40 cal/cm <sup>2</sup> ELIM = 26 cal/cm <sup>2</sup>
								
30741762	30871762	34581762	34591762	+	40871514		=	ATPV = 49 cal/cm <sup>2</sup> ELIM = 42 cal/cm <sup>2</sup>
								
34831737		30741762	30871762	+	34581762	34591762	=	ATPV = 28 cal/cm <sup>2</sup> ELIM = 24 cal/cm <sup>2</sup>
								



30741762	30871762	34581762	34591762	+	40611516	40711516	47741516	=	ATPV = 51 cal/cm <sup>2</sup> ELIM = 47 cal/cm <sup>2</sup>
									

32291517	32391517	+	40891512	49691512	=	ATPV = 27 cal/cm <sup>2</sup> ELIM = 24 cal/cm <sup>2</sup>
						

32291517	32391517	+	40871514	=	ATPV = 22 cal/cm <sup>2</sup> ELIM = 19 cal/cm <sup>2</sup>
					

34831737	+	40611516	40711516	47741516	=	ATPV = 23 cal/cm <sup>2</sup> ELIM = 17 cal/cm <sup>2</sup>
						

34831737	+	40891512	49691512	=	ATPV = 28 cal/cm <sup>2</sup> ELIM = 26 cal/cm <sup>2</sup>
					

47941075	47961075	72131075	+	40881532	=	ATPV = 35 cal/cm <sup>2</sup> ELIM = 32 cal/cm <sup>2</sup>
						

47931077	+	40891512	49691512	=	EBT = 34 cal/cm <sup>2</sup> ELIM = 31 cal/cm <sup>2</sup>
					

47931077	+	40881532	=	EBT = 43 cal/cm <sup>2</sup> ELIM = 38 cal/cm <sup>2</sup>
				

30741762	30871762	34581762	34591762	+	40881532	=	ATPV = 42 cal/cm <sup>2</sup> ELIM = 36 cal/cm <sup>2</sup>
							

47941075	47961075	72131075	+	47931077	=	EBT = 36 cal/cm <sup>2</sup> ELIM = 27 cal/cm <sup>2</sup>
						

# COMBINE FOR BEST PROTECTION

## BOX CLASS 2 - EN 61482-1-2



TO ACHIEVE **FULL PROTECTION** WHEN WORKING WHERE THERE IS **RISK OF ELECTRIC ARC FLASHES**, **ADDITIONAL EQUIPMENT IS REQUIRED**. BLÅKLÄDER THEREFORE ALSO OFFERS PRODUCTS FROM **EXTERNAL SUPPLIERS**.



**792600009985**  
**Eureka 13-4 HEAT FR-AF**

PROTECTIVE GLOVE  
7-12

**FUNCTIONALITY:** Flame retardant glove with cut resistance. ASTM F2675, ATPV = 16 cal/cm<sup>2</sup> (back of hand), 30 cal/cm<sup>2</sup> (palm).

**PACKAGING:** Sold in pairs.

**CERTIFICATION:** EN 388 (3X43E), EN 407 (41324X), cat II.



**E64200009900**  
**Eureka 18-2HAF-10**

PROTECTIVE GLOVE  
7-12

**FUNCTIONALITY:** Flame retardant glove with cut resistance. ASTM F2675, ATPV = 10 cal/cm<sup>2</sup> (back of hand).

**PACKAGING:** Sold in pairs.

**CERTIFICATION:** EN 388 (2X31B), EN 407 (4121XX), cat III.



**E64100009935**  
**Eureka 1510-4 HEAT AF-12**

PROTECTIVE GLOVE  
7-12

**FUNCTIONALITY:** Flame retardant glove with cut resistance. ASTM F2675, ATPV = 12 cal/cm<sup>2</sup> (back of hand).

**PACKAGING:** Sold in pairs.

**CERTIFICATION:** EN 388 (2X43D), EN 407 (42424X), cat III.



**E64300008900**  
**Eureka 13-4HAF-50**

PROTECTIVE GLOVE  
8-12

**FUNCTIONALITY:** Flame retardant glove with cut resistance. ASTM F2675, ATPV = 59 cal/cm<sup>2</sup> (back of hand), 42 cal/cm<sup>2</sup> (palm). EN 61482-1-2 (modified) box class 2.

**PACKAGING:** Sold in pairs.

**CERTIFICATION:** EN 388 (3X43E), EN 407 (41324X), cat III.



**E54400001000**  
**V-GARD 950, class 2**

PROTECTIVE HELMET  
One size

**FUNCTIONALITY:** Open arc classified protection helmet with visor. Non-vented. 4-pt chinstrap. Turn knob adjustment.

**CERTIFICATION:** GS-ET-29 class 2 (7 kA).

# WASHING AND CARE INSTRUCTIONS – **FOR MAINTAINED PROTECTION AND A LONGER LIFE**



Correct and regular care is very important to make sure that the garment's protective properties remain intact. The right care and maintenance will also help ensure that the garment can be used for as long as possible. Washing does of course wear a garment, but dirt has a negative effect on the textile and wears it out faster than if it is kept clean.

Washing and drying are also aspects of a protective garment's life that can be simulated in a lab environment. So the washing process is used to evaluate how a garment's protective functions are affected over time. It is, after all, just as important that the protection works when the garment has been used for a while as when it is new. Ageing simulation is therefore included in many protective standards.

Some protective parameters suffer more than others in washing and drying, such as hi-vis properties, while others are barely affected by the number of wash cycles. One example of the latter is the flame protective properties in FR materials – and this applies whether the flame protection is inherent or comes from treatment with Proban\*.

EN ISO 15797 is the test method used to simulate an industrial washing process in a laboratory environment. The standard specifies the actual test method, but does not state which parameters are to be tested after washing, or what an approved result is. EN ISO 15797 is often mistakenly seen as an actual certification, but this is not the case. Instead EN ISO 15797 is used as a pre-treatment method/ageing simulation, alongside another standard or requirement specification\*\*.

For safety garments, the function of the protective properties is assessed after washing, which is a requirement of the certification process. General wear on the garment is not assessed, however, as long as the protective functions are intact.

Blåkläder uses the following test parameters, in accordance with EN ISO 15797:

#### **Washing procedure 8:**

- Coloured workwear in blended material
  - Washing temperature 75°C, no bleach
  - Tumble drying – air temperature at max 90°C
- Alternatively
- Tunnel dryer – air temperature 155°C

The laundry symbols usually seen on clothing labels – such as the washtub – are only used for household laundry. Labels for industrial washing comply with specification EN ISO 30023 and what is known as the PRO label.

It is worth noting that although EN ISO 15797 is designed to emulate an industrial washing cycle, there are many parameters and variables in an industrial washing process that could deviate considerably from the test method. In practice, this means that a garment with the PRO label may still need to be tested in its own specific industrial washing process. This is also something Blåkläder recommends.

Whatever the washing method, however, it is always important to follow the washing instructions to avoid risking the garment's safety features and adding unnecessary wear and tear.

If the care instructions are not followed, this means that the safety certification is no longer valid and the garment should no longer be used.

\* See information under Flame Resistant Textile.

\*\* For 'normal' workwear there is no universal description of what is needed for full approval after testing to EN ISO 15797. It is a matter of judgement, often based on what the expectations are for different types of garment.



## WASHING SYMBOLS

Here are explanations of some of the most common washing symbols that you can find on products from Blåkläder.

	Normal wash at stated temperature		Do not tumble dry		Ironing max. 110°C, low temperature without steam
	Gentle wash at stated temperature		Tumble dry max. 60°C, low temperature		Ironing max. 150°C, normal temperature
	Very gentle wash at stated temperature		Tumble dry max. 80°C, normal temperature		Ironing max. 200°C, high temperature
	Do not wash		Hang dry		Do not dry clean
	Hand wash only		Dry flat		Dry clean
	Do not bleach		Drip dry		Mild dry clean
	Can be bleached		Do not iron		EN ISO 15797 Industrial wash

# PROTECTION AGAINST CHEMICAL SPLASH - EN 13034



## EN 13034 – “Protective clothing against liquid chemicals” is generally referred to as the chemical splash standard.

Clothing certified to this norm offer the wearer very limited protection against diluted chemicals. Protection is mainly about ensuring that the clothes do not immediately absorb the chemical, but give the wearer time to take them off before the liquid penetrates. To meet the minimum requirements of EN 13034, a garment only has to repel individual chemical solutions – and this highlights how important it is to make sure what kind of substances a garment is resistant to. Otherwise, there is a risk that the workwear offers no protection against the actual chemical substance being used.

It is a common misunderstanding that EN 13034 certified garments are suitable to wear for regular handling of chemicals, but that is not the case. If chemical substances are handled continuously, full chemical protection should be used, as EN 13034 certified garments are not enough.

To make sure that a broad spectrum of different chemical substances can be repelled, such as acids, bases, oils and solvents, the textile in the clothing has to be treated with fluorocarbon\*. Fluorocarbon provides effective protection against all kinds of liquids, but it is also the only surface treatment that repels oil and solvents.

In polymer form such as plastic, fluorocarbons can be found for example in Teflon-coated frying pans, and as a membrane in some technical garments as a wind and water shield.

Fluorocarbons add a wide range of effective protective properties, but they also contain many substances that have a severely negative impact on humans, animals and the natural

environment. When fluorocarbons enter the food chain, via oceans and watercourses, they eventually end up on our dinner plates. The fluorocarbon group includes substances that are carcinogenic, and disrupt the endocrine (hormone) and reproductive systems, which can have serious consequences for humans and other animals. What's more, fluorocarbons are not biodegradable, which means that once they enter the natural ecocycle, they stay there indefinitely.

Fluorocarbon is not water soluble and cannot be washed out of a garment, although its effect does decline through use and washing. This is primarily because residues of washing detergent and insoluble dirt collect in the garment, and the textile pills on the surface as part of normal wear and tear. In a washed and dried garment, however, the fluorocarbon can be reactivated by heating it to about 80 degrees Celsius for one minute.

Continuously adding more fluorocarbon after washing puts a considerable burden on the environment, partly because only a very small percentage of the fluorocarbon stays on the textile, but mainly because it can have an adverse effect on significant safety features in the garment. For one the colour and luminance of hi-vis garments may be reduced to limits that are below official requirements, but the flame resistant properties can also be negatively affected. Elevated levels of fluorocarbon in a FR garment could reduce the flame protection.

With this in mind, Blåkläder does not recommend re-impregnation with fluorocarbon. Instead we have chosen to validate the EN 13034 properties before and after a maximum number of washes.

See the table for information on the protective performance of each main material in our FR collections.

\*It is possible to achieve repellence against acids and alkaline solutions in low concentrations with surface treatments other than fluorocarbon. Fluorocarbon is however needed to achieve the required level of repellence against oil, fat and solvents, as it is far more resistant to washing than other surface treatments. As well as lower levels of protection against a more limited spectrum of chemicals, frequent re-impregnation is needed for alternative surface treatments, which increases the environmental impact. Moreover, industrial garment care is not possible using known, applicable fluorocarbon-free techniques.

QUALITY 1512		Evaluated after 5 wash cycles	Evaluated after 20 wash cycles
Property	Chemical	Class	Class
The material's ability to repel chemicals (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	-	-
	Butanol	-	-
The ability of chemicals to penetrate the material (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	-	-
	Butanol	-	-

QUALITY 1513		Evaluated after 5 wash cycles	Evaluated after 20 wash cycles
Property	Chemical	Class	Class
The material's ability to repel chemicals (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	-	-
	Butanol	-	-
The ability of chemicals to penetrate the material (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	-	-
	Butanol	-	-

QUALITY 1514		Evaluated after 5 wash cycles	Evaluated after 20 wash cycles
Property	Chemical	Class	Class
The material's ability to repel chemicals (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	3	-
	Butanol	3	-
The ability of chemicals to penetrate the material (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	3	-
	Butanol	3	-

QUALITY 1516		Evaluated after 5 wash cycles	Evaluated after 20 wash cycles
Property	Chemical	Class	Class
The material's ability to repel chemicals (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	1*	-
	Butanol	3	-
The ability of chemicals to penetrate the material (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	3	-
	Butanol	3	-

\*Does not meet minimum requirements (class 3).

QUALITY 1534		Evaluated after 5 wash cycles	Evaluated after 30 wash cycles
Property	Chemical	Class	Class
The material's ability to repel chemicals (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	-	-
	Butanol	3	3
The ability of chemicals to penetrate the material (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	3	3
	Butanol	3	3

QUALITY 1560		Evaluated after 5 wash cycles	Evaluated after 30 wash cycles
Property	Chemical	Class	Class
The material's ability to repel chemicals (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	-	-
	Butanol	3	3
The ability of chemicals to penetrate the material (highest level class 3)	H <sub>2</sub> SO <sub>4</sub>	3	3
	Na OH (10%)	3	3
	O-xylene	3	3
	Butanol	3	-

# THE PPE DIRECTIVE/EN STANDARDS

Personal protective equipment is designed to protect the wearer against risks to their health and/or safety. Only PPE products that comply with the EU's Personal Protective Equipment (PPE) Regulation EU 2016/425 may be placed on the market within the European Member States (EU) and the European Economic Area (EEA).

Under the PPE Directive, it is the responsibility of the manufacturer to ensure that the product placed on the market complies with the legal requirements. The legislation is interpreted in standards that specify the actual requirements that apply to each specific type of personal protective equipment. The requirements cover protective performance, safe use, marking and technical documentation.

All PPE that is placed on the market within the EU and the EEA must bear the CE mark.

Under the legislation, personal protective equipment is divided into three categories:

**Category I** – Protective equipment of simple design where the end-user can assess the level of protection required. Products from Blåkläder: rainwear.

**Category II** – Protective equipment that is neither simple nor complex and protects against medium risks. Products from Blåkläder: hi-vis garments, safety footwear, protective gloves and knee pads.

**Category III** – Protective equipment of complex design that protects the wearer against dangers that may seriously or irreversibly damage health, the effects of which the end-user cannot identify in sufficient time. Examples of products from Blåkläder: garments that protect against the thermal effects of an electric arc.

## EN ISO 20471



Protective clothing certified according to EN 471/20471 provides the wearer with visibility in hazardous situations under all lighting conditions during the day and under the illumination of vehicle headlights in the dark. High requirements are set, including for the fabric's luminance and reflection. The garments are classified based on the area of visible material and in combination with the reflector area and specific design requirements.

	Background material (m <sup>2</sup> )	Reflective material (m <sup>2</sup> )
Class 1	0,14	0,10
Class 2	0,50	0,13
Class 3	0,80	0,20

## EN 342



Protective clothing certified according to EN 342 provides the wearer with protection against cold surroundings. Requirements are set for insulation capacity as well as air permeability.

## EN 343



Protective clothing certified according to EN 343 protects against precipitation such as rain or snow, fog and soil moisture. The garments and the seams are tested for their waterproofing and water resistance. The garments are classified based on waterproofing and water resistance to give a recommended working time.



## EN ISO 11611



Protective clothing certified according to EN ISO 11611 provides the wearer with protection against small splashes of molten metal as well as transitory contact with flame. The garments certified according to this standard are suitable for users who weld or work in a similar industry. The garments are classified based on their protective capacity against different levels of welding techniques which cause more or less spray and thermal radiation.

**Class 1** – Protection against less dangerous welding techniques and situations, which cause less spray and lower thermal radiation.

**Class 2** – Protects against more risky welding techniques and situations, which cause higher levels of spray and thermal radiation.

**(A1)** Limited flame spread, surface ignition method.

**(A2)** Limited flame spread, edge ignition method.

## EN ISO 11612



Protective clothing certified according to EN ISO 11612 provides the wearer with protection against transitory contact with heat and flame. The heat can be convection heat, thermal radiation, metal splash or a combination of these.

**The garments are classified based on the following parameters:**

**(A1)** Limited flame spread, surface ignition method.

**(A2)** Limited flame spread, edge ignition method.

**(B)** Convection heat, scale 1-3 where 3 is best.

**(C)** Thermal radiation, scale 1-4 where 4 is best.

**(D)** Molten aluminium splash, scale 1-3 where 3 is best.

**(E)** Molten iron splash, scale 1-3 where 3 is best.

**(F)** Contact heat, scale 1-3 where 3 is best.

## EN ISO 13034



Protective clothing that is certified to EN ISO 13034 is not designed to provide full protection to the wearer when regularly handling chemicals. It is only suitable for use where there is a risk of exposure to weak chemical substances in spray form or accidental low-volume splashes. The clothing provides enough protection to allow the wearer time to remove the clothing before any chemicals on the garment penetrate the fabric.

**Available in two variants:**

**TYP 6** protective clothing tested as a full one-piece suit **TYPE PB [6]** not tested as a full one-piece suit. Any garment certified as PB [6] must be used in combination with other garments for full body protection and with other personal protective equipment.

## IEC 61482-2



Garments certified in accordance with the IEC 61482-2 standard provide a designated level of protection against the thermal hazards of an electric arc. The protective properties are designed to prevent the onset of second-degree burns. Other hazards of an electric arc, which the standard does not include, are molten metal splashes, pressure waves, electric shocks and hazardous gases created when a fabric is vaporised.

## EN ISO 14116

Protective clothing complying with this International Standard is intended to protect the user against occasional and brief contact with small igniting flames, in circumstances where there is no significant heat hazard and without the presence of another type of heat. When protection against heat hazards is necessary, ISO 11612 is recommended.

Protective clothing according to EN ISO 14116 may consist of several separate garments, or a single garment with one or more layers. All assemblies claiming compliance with this standard shall achieve a limited flame spread index of 1, 2 or 3 when tested in accordance with ISO 15025.

**LIMITED FLAME SPREAD INDEX:**

**Index 1** (flame spread, flaming debris and afterglow properties)

**Index 2** (as index 1 and included hole formation properties)

**Index 3** (as index 2 and included afterflame properties)

If the index is 1 (lowest level) the garment can only be used outside a garment with index 2 or 3. Index 1 may not have skin contact, e.g. neck and wrist.

## IEC 61482-1-1

**Open Arc test:** in this test, fabrics and garments are exposed to an open electric arc. Each fabric or combination of fabrics is given a value expressed as cal/cm<sup>2</sup> (calorific value). This value is the maximum incident thermal energy to which a fabric can be exposed and still provide protection against second-degree burn injury; Arc Thermal Performance Value (ATPV), or when holes form in the fabric; Energy Break-Open Threshold (EBT). Both ATPV and EBT are calculated with a 50% probability of protection.

In 2019, an ELIM value was added to complement ATPV and EBT. This will specify the upper limit of incident energy to which a garment can be exposed without any risk of second-degree burn injury or the formation of holes in the fabric.

The higher the calorific value of the fabric or garment, the greater the protection for the wearer. These tests can also be carried out on combinations of fabrics/garments and thereby improve thermal protective performance.

## EN 1149-5



Protective clothing that is certified to EN 1149-5 must be used as part of an earthed system to avoid electrostatic discharges in explosive atmospheres.

## IEC 61482-1-2

**Box test:** in this test, fabrics and garments are exposed to an electric arc confined in a box at a specific value. The arc current is 400 V and the duration is 500 ms. There are two classes for the test. The test gives a pass or fail result. Combinations of different garments or lined garments are often required to pass the box test Class 2.

	Electric arc	Time
Class 1/APC1	4kA – 168 kJ (400v)	500 ms
Class 2/APC2	7kA – 320 kJ (400v)	500 ms

# BLÅKLÄDER THE QUALITY FACTS



## YOUR OPINION

We listen closely to our customers, the people who work hard in Blåkläder working clothes. Feel free to tell us what you think of our clothes and what we can do to improve them. Write a post on Facebook or send an email to [uksales@blaklader.com](mailto:uksales@blaklader.com)

**ISO  
9001**

## ISO 9001:2015

Blåkläder is ISO 9001-certified. We are continuously working to create quality in our products, our manufacturing and our business.

**ISO  
14001**

## ISO 14001:2015

We are ISO 14001-certified, which means that we are constantly working to be as considerate to the environment as possible.



## COMPLIANT AND SAFE PRODUCTS

In addition to ensuring compliance with European chemicals legislation, Blåkläder also requires our suppliers and products to be one step ahead of the regulations. Through a process of ongoing dialogue and sharing of knowledge, together with random quality testing of our products, we guarantee the safety of our products for our customers.



## DEVELOPMENT

We listen closely to the market's demands for function and quality. We have testers in various industries who help us adapt and improve our products. Our aim is for at least ten percent of our sales to come from products that have been developed over the previous 18 months.



## TOUGH TESTING

Destroying clothing is a great way to develop it! Our lab tests wear and tear, rip and pull resistance, colour fastness and shrinkage. We regularly check our materials at independent test institutes.



## MATERIALS

Different professions have different requirements for the fabric in their garments. We work with fabric producers worldwide to create materials that meet these tough demands.



## LIFETIME WARRANTY

Blåkläder offers a lifetime warranty on its seams. Professional staff and modern equipment make this warranty possible. If a seam splits, as long as it has not been torn by sharp edges or tools, we will repair it or replace the garment. We consider a garment's life span to be up until it has holes worn in it or is otherwise no longer useful.

**BCI**

## BETTER COTTON INITIATIVE

Since 2017, we have been sourcing our cotton via the Better Cotton Initiative; a programme aimed at reducing the environmental footprint of cotton production and improving the livelihoods and welfare of the farmers. Quite simply, improving the sustainability of cotton.



## OUR OWN DESIGN

Functional, comfortable garments with an attractive design. That's the result of long tradition, expertise and collaboration with users. We develop specially designed collections for companies that want to show off their own profile.



## MANY SIZES AND COLOURS

Blåkläder has one of the industry's widest ranges of sizes and colours.

**1959**

## TAKING A BEATING SINCE 1959

Making rugged clothes is hard work. For over 60 years, we have developed our range of functional work clothes and shoes. Today we're one of Sweden's leading producers of heavy work clothes.



## DISTRIBUTION

Blåkläder has offices in many European countries and in North America. We sell our garments via retailers around the world. We are constantly training the people who sell our products to ensure a high level of service throughout the distribution chain.



## OUR FACTORIES

Through our factories, we have full oversight of the production process and are able to coordinate and limit the number of subcontractors. Limiting the number of business partners gives us greater transparency along the manufacturing chain. This allows us to maintain the highest standards of quality at every stage of production and ensure that our processes are sustainable.



## STORES

Blåkläder works hard to ensure the customer gets their order in full and on time. That is why our warehouse covers 40,000 m<sup>2</sup>, where 4 million garments are stored annually. It is from this central hub we send garments worldwide.

**OEKO  
-TEX  
100**

## OEKO-TEX 100

Most of the materials and components in Blåkläder's products meet the requirements of Standard 100 by Oeko-Tex, Product Class 2. This means that the material is safe to wear in direct contact with the skin.

**SA  
8000**

## SA 8000

Our factories operate in compliance with SA8000/ BSCI, which are global social accountability standards for decent working conditions for the employees. Both standards are based on the ILO's core conventions, the UN's Universal Declaration of Human Rights and the UN's Convention on the Rights of the Child. This means that the performance of our factories is measured in eight areas important to social accountability: child labour, forced labour, health and safety, free association and collective bargaining, discrimination, disciplinary practices, working hours and compensation.





## OEKO-TEX – SUSTAINABLE TEXTILE

### STANDARD 100 BY OEKO-TEX®

Materials and components in Blåkläder's flame resistant range meet the requirements of STANDARD 100 by OEKO-TEX, class II, which means they are safe to wear in close contact with the skin. The wearer can therefore rest assured that our clothing materials do not contain any known allergens or hazardous substances. Safe wear of our garments is also positive for everyone who comes into contact with materials and products in the supply chain.

### STeP BY OEKO-TEX®

Not only are the materials and components safe to wear against the skin, the production at our four Sri Lanka factories has also been awarded STeP by OEKO-TEX certification. This, plus the fact that almost 90% of our woven flame resistant materials are made in STeP by OEKO-TEX certified production, means that Blåkläder's FR range is made in an environmentally and socially sustainable production chain, with high demands on quality control. This is a crucial step in our constant efforts for greater sustainability, and something we are naturally delighted with and proud of.



**BLÅKLÄDER**  
WORKWEAR

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