Brief information about standards and markings for clothing that appear in our catalogue

EN ISO 11612 - CLOTHING TO PROTECT AGAINST HEAT AND FLAME

Clothing approved under the EN ISO 11612 standard provides protection while working in hot environments where there is a risk of sudden contact with a small flame. The clothing also provides various degrees of protection against heat convection and radiant heat for a limited time and intensity. The standard does not apply for welding operations or equipment for fire-fighters.

Coding	Classes:
A, Limited flame spread.	A1 and A2. No edge ignition, no burn holes, no molten debris and no flaming. After glow time shall be less than 2 seconds. Tests are conducted by applying the flame from the edge of the fabric and from above. A1 is surface ignition and A2 is edge ignition.
B, Convective heat:	B1, B2 and B3. The HTI (Heat Transfer Index) indicates how many seconds it takes to attain a temperature rise of 24°C. Highest class B3.
C, Radiant heat:	C1, C2, C3 and C4. The number of seconds it takes for radiant heat to cause the temperature to rise by 24°C. Highest class C4
D, Molten aluminium splash:	D1, D2 and D3. A PVC membrane is attached to the reverse of the fabric sample and the minimum amounts of molten aluminium for each class are then splashed on the sample. The PVC membrane must be undamaged after the test has been carried out. The highest class is D3.
D, Molten iron splash:	E1, E2 and E3. A PVC membrane is attached to the reverse of the fabric sample and the minimum amounts of molten iron for each class are then splashed on the sample. The PVC membrane must be undamaged after the test has been carried out. The highest class is E3.
F, Contact heat.	F1, F2 and F3. Indicates the resistance of the fabric in seconds. The fabric shall not ignite or shrink due to temperatures of up to 250°C. (This code was not included in EN 531)

Some design requirements: - The garment must cover the whole upper body, neck, arms and legs. Jackets/tops must overlap with trousers/bottoms when the body is moving, e.g. when stretching or kneeling.
The following also apply for codes D and E: - trouser legs and sleeves must not be turned up.
- all pockets must have flaps that are at least 20 mm wider than the actual pocket opening. This rule does not apply to side pockets on trousers with openings placed at an angle of less than 10° to the side seam.
Other details: - Codes A, B and C are mandatory, while codes D, E and F are optional requirements.
- Specific tests are conducted to ensure that fabrics and seams meet the requirements for strength and dimensional stability to washing.
- CARE INSTRUCTIONS: Follow the washing instructions on the label in your garment. Close zips and buttons before washing the garment. Only use a synthetic detergent. Check the garment after washing and drying before use.

EN ISO 11611 - PROTECTIVE CLOTHING FOR USE IN WELDING AND ALLIED PROCESSES
(Protective clothing for use in welding and allied processes)

Clothing approved under the EN ISO 11611 standard provides protection for those carrying out welding operations.
There are two classes - Class 1 and Class 2. (See the comparison below)

Coding

Molten metal:	Class 1: 15 drops may cause a temperature rise of 40° on the fabric's reverse side without ignition
	Class 2: 25 drops may cause a temperature rise of 40° on the fabric's reverse side without ignition
Heat transmission:	Class 1: At least 7 sec, 20 kW/m² heat flow
	Class 2: At least 16 sec, 20 kW/m² heat flow

Some design requirements:
- The garment must cover the whole upper body, neck, arms and legs. Jackets/tops must overlap with trousers/bottoms when the body is moving, e.g. when stretching or kneeling.
- all pockets must have flaps that are at least 20 mm wider than the actual pocket opening. This rule does not apply to side pockets on trousers with openings placed at an angle of less than 10° to the side seam. A ruler pocket with an opening of 75 mm or less may be placed behind the side seam.
- trouser legs and sleeves must not be turned up.

Other:
- Specific test methods are used to ensure that fabrics and seams meet the requirements for wear, tear and washing.

EN 1149-5 - PROTECTIVE CLOTHING - ELECTROSTATIC PROPERTIES - Part 5: Material performance and design requirements
(Protective clothing - Electrostatic properties - Part 5: Material performance and design requirements)

Clothing approved under the EN 1149-5 standard provides protection against the danger caused by static electricity.

Some design requirements:
- Buttons, zips and other fastenings must be covered with the anti-static fabric.
Other:
- When the EN-1149-1 standard or the EN 1149-3 standard is mentioned, this is the designation of fabrics that meet the standard's requirements for electrostatic properties.
- The use of protective footwear marked with ESD is recommended.

EN 61482-1-2/IEC 61482-2 - LIVE WORKING – PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF AN ELECTRIC ARC

(Live working - Protective clothing against the thermal hazards of an electric arc. Part 2: Requirements.

EN 61482-1-2/IEC 61482-2 is the first European standard covering protective clothing against electric arcs
There are two classes (see the comparison below).

Coding

Class 1: Equivalent to 4 kA, 400 volt for 500 ms. The material or garment must not burn for more than 5 seconds, melt through or form holes larger than 5 mm.

Class 2: Equivalent to 7 kA, 400 volt for 500 ms. The material or garment must not burn for more than 5 seconds, melt through or form holes larger than 5 mm.

Some design requirements:

- Buttons, zips and other fastenings must be covered by the electric arc resistant fabric.

Other:

- IEC61482-2 requires garments to be sewn with flame resistant threads. This is not a requirement for garments complying with the EN 61482-1-2 standard.

ATPV
XX.X
Cal/cm²

ATPV (Arc Thermal Protective Value)

ATPV indicates that the garment/fabric has been arc flash tested according to the EN 61482-1-1/ASTM F1959 standard and provides protection against incident energy, the value of which is given in units of calories per square centimetre. The ATPV shows the lowest rating at which the energy of the electric arc causes the fabric to break open. At this value, there is a 50% probability that sufficient heat will transfer through the garment/fabric to cause a second-degree burn injury based on the Stoll Curve. The higher the value, the better the protection provided by the garment/fabric. When working in an environment where there is the possibility of being exposed to an arc flash, it is important to wear several layers of clothing, e.g. with a flame-resistant base layer, to provide strong protection.

EN 13034 Type PB [6] PROTECTIVE CLOTHING AGAINST LIQUID CHEMICALS - PERFORMANCE REQUIREMENTS FOR CHEMICAL PROTECTIVE CLOTHING OFFERING LIMITED PROTECTIVE PERFORMANCE AGAINST LIQUID CHEMICALS

(Type 6 and Type PB [6] equipment)

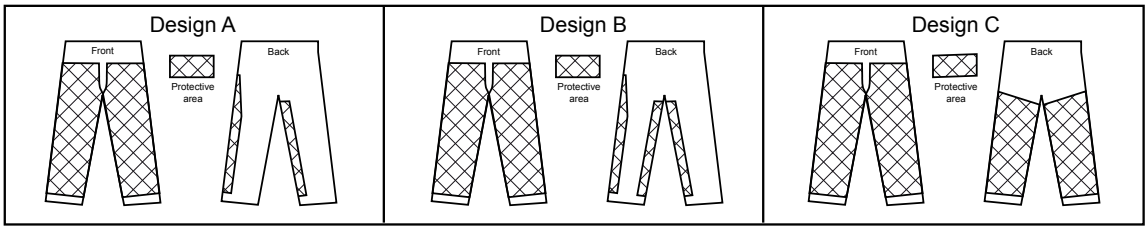
The garment should be used together with chemical resistant gloves, boots and other garments that offer protection according to the EN 13034 standard. The protective clothing can be used where there is a risk of minor exposure to chemical splashing/ splattering, where a full chemical barrier is not required. Specialist industrial laundering is required for reapplication of the garment; reapplication should be performed after 5 washes to maintain protection. Type PB[6] garments provide partial body protection and have not been subjected to a whole-suit test (5.2). The material has been tested against the following chemicals in accordance with the EN 13034 standard: Sulphuric acid, H2SO4 30%, Sodium Hydroxide, NaOH 10%, O-Xylene, Butan-1-ol. For information and results for repellency and penetration of liquid chemicals (index 1-3, highest level 3) for each garment, please see the information inside the garment.

Test	Method	According to the required standard EN 13034:2005
The following fabric properties have been tested (levels 1-6, with 6 being the highest level):		
Abrasion resistance	EN 530-2	Level 1 > 10 cycles
Tearing strength (Trapezoid procedure)	ISO 9073-4	Level 1 > 5N
Breaking strength	EN ISO 13934-1	Level 1 > 30N
Puncture resistance	EN 863	Level 1 > 5N
Seam strength	EN ISO 13935-2	Class 1 > 30N

EN 381-5 - CHAIN SAW PROTECTION, REQUIREMENTS FOR LEG PROTECTORS

Garments approved under the EN 381-5 standard are intended for use during logging/chainsaw operations. There are three classes where the classification describes how the trouser protection withstands the speed of the chainsaw. Choice of design: Designs A and B both cover the front of the legs and are intended for use in normal logging work by professional foresters who are highly-trained and knowledgeable in the field. However, designs A and B differ with respect to the protection on the inside of the leg. See the diagram. Design C covers the whole leg and is intended for use by persons who do not normally work with chainsaws or extraordinary situations, e.g. work in trees. Make sure that the chainsaw protection in the trousers overlaps the chainsaw protection in the footwear.

Klass 1: 20 m/s
Klass 2: 24 m/s
Klass 3: 28 m/s



EN ISO 20471/EN 471 - HIGH VISIBILITY PROTECTIVE CLOTHING FOR PROFESSIONAL USE - Test methods and requirements. Certified high-visibility garments conform to the requirements of the EN 471 and EN ISO 20471 standards. These stipulate the surface area for reflective and fluorescent materials, and the luminance and colourfastness of the fabrics. There are also strict design requirements regulating the placing of reflectors, fluorescent material, etc. The safety classification (1-3) for area and reflective material is stated next to the symbol inside the garment, with 3 being the highest class.

Minimum area requirements for approval under EN 471/EN ISO 20471	CLASS 1	CLASS 2	CLASS 3
High-visibility fabric/fluorescent area	0.14 m²	0.50 m²	0.80 m²
Reflective	0.10 m²	0.13 m²	0.20 m²
Combined background/reflective	0.20 m²	-	-

Some design requirements:
- The areas shown in the chart above are calculated for the smallest size of each model.
- The fluorescent material must go all the way round the body, arms and legs.
- The lower reflective strip must be at least 5 cm from the bottom of the garment. There must be at least 5 cm between the reflective strips.
- If a fabric in a contrasting colour is used, there must be about the same amount of this fabric on the front and back of the garment.

Other:
- A combination of, for example, trousers in Class 2 with a jacket in Class 1 does not automatically give Class 3.
- There are certain differences in design requirements between EN 471 and EN ISO 20471. The EN ISO 20471 standard also requires the fabric to pass the luminance tests after being washed at least five times.

EN 343 - PROTECTIVE CLOTHING - PROTECTION AGAINST BAD WEATHER
This standard specifies the requirements for clothing designed to give protection against bad weather. The standard requires tests to be conducted on fabrics and seams. The values next to the umbrella symbol indicate the waterproofing (class 1-3) and the water vapour permeability (class 1-3) of the garment. Class 3 indicates the best performance.

EN 342 - PROTECTIVE CLOTHING - PROTECTION AGAINST COLD
Clothing approved under the EN 342 standard provides protection against cold. The definition of cold is, according to the standard, environments with temperatures below -5°C. Requirements relating to thermal insulation (indicated as mK/W, the higher the better), air permeability (class 1-3 where 3 is the best) and water (optional).

OEKO-TEX® STANDARD 100
Björnkläder continues its environmental work by certifying its garments in line with the requirements of the Oeko-Tex standard. The Oeko-Tex® Standard 100 label ensures the human ecological quality of a product. Certified garments are manufactured from materials and components that have been inspected for chemical content in line with the Oeko-Tex testing system. To find out which garments are certified under the Oeko-Tex Standard, please visit our website: www.grolls.se

OEKO-TEX®
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STANDARD 100
SE 11-204 Swerea IVF
Tested for harmful substances.
www.oeko-tex.com/standard100

CONFIDENCE IN TEXTILES
Tested for harmful substances
according to Oeko-Tex® Standard 100
SE 10-192 Swerea IVF

Flame-resistant

Trousers, welding New!

Welding trousers with side pockets. D-ring, ruler pocket, knife button, thigh pocket with extra pocket for mobile phone. ID card holder. Double back pockets with flap, double hammer holders, knee pad pouches to take pads 972290 and 972292. Reflectors at the left ankle.

Fabric: 80% cotton, 19% polyester, 1% antistatic. Weight: 340 g.
Wash at: 60°C
Size: 44 - 60, 92 - 124, 146 - 158
CE: EN ISO 11612 A1 B1 C1 E3 F1
EN ISO 11611 A1 class 2
EN 1149-5,
IEC 61482-2 class 1 (class 2 together with long underpants 331188)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **270057269** Navy
270057299 Black

Jacket, welding New!

Welding jacket with press studs, front lining for added safety. Chest pocket with ID card holder, side pockets with zip, D-ring, adjustable hem and cuffs, zip-up inside pocket. Articulated sleeves.

Fabric: 80% cotton, 19% polyester, 1% antistatic. Weight: 340 g.
Wash at: 60°C
Size: XS - 4XL
CE: EN ISO 11612 A1 B1 C1 E3 F1
EN ISO 11611 A1 class 2
EN 1149-5
IEC 61482-2 class 1 (class 2 together with undershirt 331190)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **770057269** Navy
770057299 Black

Jacket, welding

Flame-resistant jacket that withstands exposure to welding operations. Articulated sleeves and adjustable hem for added comfort. Double chest pockets, ID card pocket and detachable key strap. Spacious zip pocket and a mobile phone pocket inside the jacket. Jacket with press stud closure.

Fabric: 77% cotton/22% polyester/1% antistatic, canvas,
approx. 370 g/m². Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11611, A1 - class 1
EN ISO 11612, A1 B1 C1 E3 F1
EN 1149-5
IEC 61482-2 class 1.

OrderNo: **772076269** Navy/Red
772076299 Black/Grey

Boiler suit, welding New!

Welding boiler suit with press studs. Chest pockets, ID card holder, side pockets, pass-through pockets, D-ring, adjustable elasticated waist. Adjustable cuffs. Articulated sleeves. Ruler pocket and knife button. Double back pockets with flap, knee pad pouches to take pads 972290 and 972292. Reflectors at the left ankle.

Fabric: 80% cotton, 19% polyester, 1% antistatic. Weight: 340 g.
Wash at: 60°C
Size: 44 - 64, 96 - 124, 146 - 158
CE: EN ISO 11612 A1 B1 C1 E3 F1
EN ISO 11611 A1 class 2
EN 1149-5
IEC 61482-2 class 1 (class 2 together with undershirt 331190 and long underpants 331188)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **860057269** Navy

Boiler suit, welding

Flame-resistant boiler suit for welding work etc. Features double chest pockets, thigh pocket, pockets for ruler, phone and ID card, a knife button, detachable key strap and articulated knees with inside knee pad pouches. Pass-through pockets under the side pockets. Press stud closure. Use matching, approved, long kneepads, order no: 972294, 972290 or 972292.

Fabric: 77% cotton/22% polyester/1% antistatic, canvas, approx. 370 g/m². Wash at: 60°C.
Size: 44 - 64, 96 - 124, 146 - 158
CE: EN ISO 11612, A1 B1 C1 F1
EN ISO 11611, A1 - class 1
EN 1149-5
IEC 61482-2 class 1

OrderNo: **852056269** Navy

Flame-resistant and antistatic boiler suit New!

Boiler suit with concealed zip, adjustable waist, two zip-up chest pockets, inner pocket, pen pocket on the sleeve, two back pockets, ruler pocket, leg pocket, knee pad pockets. Reflective trim around legs, sleeves and shoulders.

Fabric: 99% cotton/1% antistatic, weight 350 g/m². Wash at: 60°C.
Size: 44 - 70
CE: EN ISO 11612 A1 B1 C1
EN 1149-5
EN 61482-1-2.

OrderNo: **853054624** Red

Flame-resistant

Carpenter trousers New!

Trousers with pockets for tools and pens. Zip-up pocket on left utility pocket. Side pockets, D-ring, ruler pocket, knife button, thigh pocket with extra pocket for mobile phone. ID card holder. Double back pockets with flap, double hammer holders, knee pad pouches to take pads 972290 and 972292. Reflectors at the left ankle.

Fabric: 80% cotton, 19% polyester, 1% antistatic. Weight: 340 g.
Wash at: 60°C
Size: 44 - 60, 92 - 120, 146 - 156
CE: EN ISO 11612 A1 B1 C1 F1
EN 1149-5,
IEC 61482-2 class 1 (class 2 together with long underpants 331188)
ATPV 13.8 cal/cm2
Oeko-Tex

OrderNo: **260057269** Navy
260057299 Black

Jacket

Flame-resistant jacket with articulated sleeves and adjustable hem for added comfort. Several practical pockets, ID card pocket and detachable key strap. Spacious zip pocket and a mobile phone pocket inside the jacket. Zip-up jacket.

Fabric: 77% cotton/22% polyester/1% antistatic, canvas, approx. 370 g/m². Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11612, A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1

OrderNo: **779076269** Navy/Red
779076299 Black/Grey

Polo shirt long sleeve New!

Functional polo shirt made of flame-resistant inherent fabric. Buttons at the neck.

Fabric: 60% modacrylic, 39% cotton, 1% antistatic.
Weight: 230 g. Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11612, A1, B1, C1
EN 1149-5,
IEC 61482-2 class 1

OrderNo: **074056369** Navy
074056399 Black
Replaces 984676, 984699 in spring 2017

Björnkläder

Sweatshirt jacket, flame-resistant New!

Sweatshirt jacket with concealed zip. Side pockets, the right-hand with a D-ring and an extra zip-up pocket. Inside pocket. Hem and sleeve cuffs.

Fabric: 54% modacrylic, 44% cotton, 2% antistatic.
Weight: 375 g. Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11612 A1 A2 B1 C2 F2
EN 1149-5
IEC 61482-2 class 1

OrderNo: **949056469** Navy
949056499 Black

Björnkläder

Shirt New!

Shirt with concealed buttons at the front. Two chest pockets with flap. Cuff buttons.

Fabric: 99% cotton, 1% antistatic. Weight: 190 g. Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11612 A1 A2 B1 C1
EN 1149-5
IEC 61482-2 class 1

OrderNo: **960054869** Navy
960054899 Black
Replaces 953054869/99 in spring 2017

Björnkläder

High-visibility flame-resistant

Trousers, welding New!

Welding trousers with side pockets. D-ring, ruler pocket, knife button, thigh pocket with extra pocket for mobile phone. ID card holder. Double back pockets with flap, double hammer holders, knee pad pouches to take pads 972290 and 972292.

Fabric: 80% cotton, 19% polyester, 1% antistatic.
Weight: 340 g. Wash at: 60°C,
Size: 44 - 64, 96 - 124, 146 - 158
CE: EN ISO 20471 class 2
EN ISO 11612 A1 B1 C1 E3 F1
EN ISO 11611 A1 class 2
EN 1149-5
IEC 61482-2 class 1 (class 2 together with long underpants 331188)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex.

OrderNo: **270287211** Yellow/Navy

Jacket, welding New!

Welding jacket with press studs, front lining for added safety. Chest pocket with ID card holder, side pockets with zip, D-ring, adjustable hem and cuffs, zip-up inside pocket. Articulated sleeves.

Fabric: 80% cotton, 19% polyester, 1% antistatic. Weight: 340 g.
Wash at: 60°C,
Size: XS - 4XL
CE: EN ISO 20471 class 3 (XS class 2)
EN ISO 11612 A1 B1 C1 E3 F1
EN ISO 11611; A1 class 2
EN 1149-5,
IEC 61482-2 class 1 (class 2 together with with undershirt 331190)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **780387211** Yellow/Navy

Boiler suit, welding New!

Welding boiler suit with press studs. Chest pockets, ID card holder, side pockets, pass-through pockets, D-ring, adjustable elasticated waist. Adjustable cuffs. Articulated sleeves. Ruler pocket and knife button. Double back pockets with flap, knee pad pouches to take pads 972290 and 972292.

Fabric: 80% cotton, 19% polyester, 1% antistatic.
Weight: 340 g. Wash at: 60°C,
Size: 44 - 64, 96 - 124, 146 - 158
CE: EN ISO 20471 class 1
EN ISO 11612 A1 B1 C1 E3 F1
EN ISO 11611 A1 class 2
EN 1149-5
IEC 61482-2 class 1 (class 2 together with Undershirt 331190 and long underpants 331188)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **865187269** Navy/Yellow

Boiler suit, welding

Flame-resistant, high-visibility boiler suit with press studs that also withstand welding work. Features thigh pocket, pockets for ruler, phone and ID card, a knife button and articulated knees with inside knee pad pouches. Use matching, approved, long kneepads, order no: 972294, 972290 or 972292.

Fabric: 77% cotton/22% polyester/1% antistatic, canvas, approx. 370 g/m². Wash at: 60°C.
Size: 44 - 64, 96 - 124, 146 - 158
CE: EN ISO 20471 class 1
EN ISO 11611, A1 - class 1
EN ISO 11612, A1 B1 C1 E3 F1
EN 1149-5
IEC 61482-2 class 1

OrderNo: **847076269** Navy/Yellow

Carpenter trousers New!

Trousers with double utility pockets with compartments for tools and pens. Zip-up pocket on left utility pocket. Side pockets, D-ring, ruler pocket, knife button, thigh pocket with extra pocket for mobile phone. ID card holder. Double back pockets with flap, double hammer holders, knee pad pouches to take pads 972290 and 972292.

Fabric: 80% cotton, 19% polyester, 1% antistatic.
Weight: 340 g. Wash at: 60°C
Size: 44 - 64, 96 - 124, 146 - 158
CE: EN ISO 20471 class 2
EN ISO 11612 A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1 (class 2 together with long underpants 331188)
ATPV 13.8 cal/cm2
Oeko-Tex

OrderNo: **260287211** Yellow/Navy

Carpenter trousers New!

Trousers with double utility pockets with compartments for tools and pens. Zip-up pocket on left utility pocket. Side pockets, D-ring, ruler pocket, knife button, thigh pocket with extra pocket for mobile phone. ID card holder. Double back pockets with flap, double hammer holders, knee pad pouches to take pads 972290 and 972292.

Fabric: 80% cotton, 19% polyester, 1% antistatic.
Weight: 340 g. Wash at: 60°C
Size: 44 - 60, 88 - 120, 146 - 156
CE: EN ISO 20471 class 1
EN ISO 11612 A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1 (class 2 together with long underpants 331188)
ATPV 13.8 cal/cm2
Oeko-Tex

OrderNo: **265187269** Navy/Yellow

High-visibility flame-resistant

Carpenter trousers

Trousers made of inherent fabric. Double utility pockets with compartments for tools and pens. D-ring and key holder inside the right-hand pocket. Hammer loop on right-hand side. Side pockets. ID card holder hidden under the right-hand utility pocket. Double back pockets, the left-hand pocket with flap. Double thigh pockets with multiple compartments for tools, mobile phone and pens. Ruler pocket and knife button. Articulated knees. Knee pad pouches to take pads 972290 and 972292.

Fabric: 55% modacrylic/Protex, 38% cotton, 5% Kevlar, 2% antistatic. Weight: 340 g. Wash at: 60°C.
Size: 44 - 62, 96 - 120, 146 - 158
CE: EN ISO 20471 class 2
EN ISO 11612, A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1

OrderNo: **204076011** Yellow/Navy

Jacket

Flame-resistant high visibility jacket with zip and many practical details such as attachments for two-way radios, two chest pockets and two side pockets. Spacious pocket and mobile phone pocket inside the jacket.

Fabric 77% cotton/22% polyester/1% antistatic, approx. 370 g/m².
Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 20471 class 1
EN ISO 11612, A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1

OrderNo: **778086269** Navy/Yellow

Jacket **New!**

Jacket with zip, front lining for superior safety. Chest pockets, ID card holder, zip-up side pockets, D-ring, adjustable hem and cuffs, zip-up inside pocket. Articulated sleeves.

Fabric: 80% cotton, 19% polyester, 1% antistatic.
Weight: 340 g. Wash at: 60°C
Size: XS - 4XL
CE: EN ISO 20471 class 2
EN ISO 11612 A1 B1 C1 E3 F1
EN 1149-5
IEC 61482-2 class 1 (class 2 together with undershirt 331190)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **774287211** Yellow/Navy

Jacket New!

Jacket with zip, front lining for superior safety. Chest pocket with ID card holder, side pockets with zip, D-ring, adjustable hem and cuffs, zip-up inside pocket. Articulated sleeves.

Fabric: 80% cotton, 19% polyester, 1% antistatic.
Weight: 340 g. Wash at: 60°C
Size: XS - 4XL
CE: EN ISO 20471 class 3 (XS class 2)
EN ISO 11612 A1 B1 C1 E3 F1
EN 1149-5
IEC 61482-2 class 1 (class 2 together with undershirt 331190)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **760387211** Yellow/Navy

Jacket

Jacket made of inherent fabric with zip. Chest pockets, the left-hand pocket with zip, the right-hand with flap. ID card holder right-hand chest pocket. Zip-up pocket on left sleeve. Side pockets, D-ring inside the right-hand pocket. Inside mobile phone pocket, and zip-up inside pocket. Buttons at hem to adjust the fit.

Fabric: 55% modacrylic/Protex, 38% cotton, 5% Kevlar, 2% antistatic. Weight: 340 g. Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 20471 class 3 (XS class 2)
EN ISO 11612, A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1

OrderNo: **779176011** Yellow/Navy

Boiler suit New!

Boiler suit with zip. Chest pockets, loops for communication equipment, ID card holder, side pockets, pass-through pockets, D-ring. Back waist elastication. Left sleeve pocket. Adjustable cuffs. Articulated sleeves. Ruler pocket. Double back pockets with flap, knee pad pouches to take pads 972290 and 972292.

Fabric: 80% cotton, 19% polyester, 1% antistatic. Weight: 340 g.
Wash at: 60°C.
Size: 44 - 70
CE: CE: EN ISO 20471 class 3
EN ISO 11612 A1 B1 C1 E3 F1
EN 1149-5
IEC 61482-2 class 1 (class 2 together with undershirt 331190 and long underpants 331188)
ATPV 13.8 cal/cm2
EN ISO 13034 PB [6]
Oeko-Tex

OrderNo: **880387211** Navy/Yellow

Jacket with long zip

Jacket made of inherent fabric. Long zip. Side pockets, the right-hand pocket with zip and D-ring. Inside pocket.

Fabric: 54% modacrylic/Protex, 44% cotton,
2% antistatic. Weight: 375 g. Wash at: 60°C.
Size: XS - 3XL
CE: EN ISO 20471 class 3 (XS class 2)
EN ISO 11612, A1 A2 B1 C2 F2
EN 1149-5
IEC 61482-2 class 1

OrderNo: **947086411** Yellow/Navy

Björnkläder

Jacket with long zip

Jacket made of inherent fabric. Long zip. Side pockets, the right-hand pocket with zip and D-ring. Inside pocket.

Fabric: 54% modacrylic/Protex, 44% cotton,
2% antistatic. Weight: 375 g. Wash at: 60°C.
Size: XS - 3XL
CE: EN ISO 20471 class 1
EN ISO 11612, A1 A2 B1 C2 F2
EN 1149-5
IEC 61482-2 class 1

OrderNo: **948086469** Navy/Yellow

Björnkläder

Shirt **New!**

Shirt with concealed buttons at the front. Two chest pockets with flap. Cuff buttons.

Fabric: 99% cotton, 1% antistatic. Weight: 190 g. Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11612 A1 A2 B1 C1
EN 1149-5
IEC 61482-2 class 1
EN ISO 20471 class 1

OrderNo: **965184869** Navy/Yellow

Björnkläder

Polo shirt long sleeve New!

Polo shirt made of inherent fabric. Press studs.

Fabric: 60% modacrylic, 39% cotton, 1% antistatic.
Weight: 230 g. Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11612, A2, B1, C1
EN 1149-5, IEC 61482-2 class 1
EN ISO 20471 class 3

OrderNo: **072086411** yellow *Replaces 326200*

T-Shirt, long sleeve New!

T-Shirt made of inherent fabric.

Fabric: 60% modacrylic, 39% cotton, 1% antistatic.
Weight: 230 g. Wash at: 60°C.
Size: XS - 4XL
CE: EN ISO 11612, A2, B1, C1
EN 1149-5, IEC 61482-2 class 1
EN ISO 20471 class 3

OrderNo: **077086411** Yellow *Replaces 326201*

Flame-resistant, high-visibility vest class 3

Chest pocket.

Fabric: 100% polyester, 130 g/m².
Size: M - 4XL
CE: EN ISO 20471 class 3
EN ISO 14116 Index 1

OrderNo: **308210** Yellow/Orange

Parka jacket

Parka jacket made of inherent fabric. Front zip. Adjustable, removable hood. Removable lining. Chest pockets with flap, ID card holder inside the right-hand pocket. Holder above right chest pocket for walkie-talkie. Side pockets. The right pocket with zip, D-ring and key holder. Waist and hem with draw-string. Taped seams, windproof and waterproof.

Fabric: 55% modacrylic/Protex, 44% cotton, 1% antistatic.
Weight: 290 g. Wash at: 40°C.
Size: XS - 5XL
CE: EN ISO 20471 class 1
EN ISO 11612 A1 B1 C1 F1
EN 1149-5, IEC 61482-2 class 1
EN 343

OrderNo: **765077869**

Parka jacket

Padded parka jacket made of inherent fabric. Zip. Removable and adjustable hood. Chest pockets, ID card holder inside the right-hand pocket. Holder above right chest pocket for walkie-talkie. Side pockets. The right pocket with zip and D-ring. Inside pocket. Waist and hem with drawstring. Inner sleeve cuff. Taped seams, windproof and waterproof.

Fabric: 55% modacrylic/Protex, 44% cotton, 1% antistatic.
Weight: 290 g. Wash at: 40°C.
Size: XS - 3XL
CE: EN ISO 20471 class 3
EN ISO 11612 A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1
EN 343

OrderNo: **768087811**

Jacket

Padded jacket made of inherent fabric. Zip. Removable and adjustable hood. Chest pockets, ID card holder inside the right-hand pocket. Holder above right chest pocket for walk-ie-talkie. Side pockets. The right pocket with zip and D-ring. Inside pocket. Drawstring hem. Inner sleeve cuff. Taped seams, windproof and waterproof.

Fabric: 55% modacrylic/Protex, 44% cotton, 1% antistatic.
Weight: 290 g. Wash at: 40°C.
Size: XS - 3XL
CE: EN ISO 20471 class 3
EN ISO 11612 A1 B1 C1 F1
IEC 61482-2 class 1
EN 1149-5
EN 343

OrderNo: **767087811**

Trousers

Lightly-padded trousers made of inherent fabric. Loops at waist. Side pockets with flap. Right side pocket with zip and D-ring. ID card holder in right thigh pocket. Articulated knees. Zipped opening at the ankle. Adjustable ankles. Taped seams, windproof and waterproof.

Fabric: 55% modacrylic/Protex, 44% cotton, 1% antistatic.
Weight: 290 g. Wash at: 40°C
Size: XS - 3XL
CE: EN ISO 20471 class 2
EN ISO 11612 A1 B1 C1 F1
EN 1149-5
IEC 61482-2 class 1
EN 343

OrderNo: **226087811**

Björnkläder

Flame-resistant waterproof rain jacket with hood, class 3 New!

Waterproof rain jacket with hood made of flame-resistant PU/PVC. Two side pockets with flap. Heavy-duty buttons with front storm flap. Buttons for sleeve width adjustment. 5 cm transfer reflective strip around sleeves, shoulders, front and back. Excellent wear resistance.

Fabric: Fabric: 84% PVC, 16% PU on flame-resistant knit polyester.
Weight: 340 g/m2 Wash at: 40°C
Size: S - 3XL
CE: EN 471 class 3
EN 14116 Index 1/5H/40
EN 343

OrderNo: **661017**

UNIVERN

Flame-resistant waterproof trousers with shoulder straps, class 1 New!

Waterproof trousers with adjustable shoulder straps. Press studs to adjust the fit at the waist and legs. 5 cm transfer reflective strip around legs. Excellent wear resistance.

Fabric: Fabric: 84% PVC, 16% PU on flame-resistant knit polyester.
Weight: 340 g/m2 Wash at: 40°C
Size: S - 3XL
CE: EN 471 class 1
EN 14116 Index 1/5H/40
EN 343

OrderNo: **661517**

UNIVERN

Long underpants New!

Long underpants with gusseted crotch for greater comfort. Comfortable, generous fit. Soft ribbed ankles.

Fabric: 50% cotton, 39% modacrylic, 10% viscose, 1% antistatic, 160 g/m2. Wash at: 40°C.
Size: S - 3XL
CE: EN ISO 11612
EN 1149-5
IEC 61482-2

OrderNo: **331188**

Polo shirt with zip New!

Polo shirt with zip. Longer back. Comfortable, generous fit. Soft ribbed wrists.

Fabric: 50% cotton, 39% modacrylic, 10% viscose, 1% antistatic, 160 g/m2. Wash at: 40°C.
Size: S - 3XL
CE: EN ISO 11612
EN 1149-5
IEC 61482-2

OrderNo: **331191**

Sweater with crew neck New!

Sweater with crew neck and longer back. Comfortable, generous fit. Soft ribbed wrists.

Fabric: 50% cotton, 39% modacrylic, 10% viscose, 1% antistatic, 160 g/m2. Wash at: 40°C.
Size: S - 3XL
CE: EN ISO 11612
EN 1149-5
IEC 61482-2

OrderNo: **331190**

T-shirt New!

T-shirt with crew neck and longer back. Comfortable, generous fit.

Fabric: 50% cotton, 39% modacrylic, 10% viscose, 1% antistatic, 160 g/m2. Wash at: 40°C.
Size: S - 3XL
CE: EN ISO 11612
EN 1149-5
IEC 61482-2

OrderNo: **331189**

Polo neck top

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².
Size: S - 3XL
CE: EN ISO 11612 A1 B1 C1
IEC 61482-2 class 1
EN 1149-5

OrderNo: **308937**

Polo shirt with short zip

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².
Size: S - 3XL
CE: EN ISO 11612 A1 B1 C1
IEC 61482-2 class 1
EN 1149-5

OrderNo: **308936**

Shirt with crew neck

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².
Size: XS - 3XL
CE: EN ISO 11612 A1 B1 C1
IEC 61482-2 class 1
EN 1149-5

OrderNo: **308930**

Short-sleeve undershirt

Fabric certified in accordance with EN ISO 11612 A1 B1 C1, IEC 61482-2 class 1 and EN 1149-5.

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².
Size: XS - 3XL

OrderNo: **984666**

Men's long underpants

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².
Size: S - 3XL
CE: ISO 11612 A1 B1 C1
IEC 61482-2 class 1

OrderNo: **308932**

Women's long underpants

Fabric: 80% Merino wool/20% Protex-M. Weight 225 g/m².
Size: XS - XL
CE: ISO 11612 A1 B1 C1
IEC 61482-2 class 1

OrderNo: **984665**

Polo neck top with zip

Fabric: 83% Merino wool/15% Protex-M/ 2% antistatic. Weight: 360 g/m².
Size: XS - 3XL
CE: EN ISO 11612 A1 B2 C1
IEC 61482-2 class 1
EN 1149-5

OrderNo: **308927**

Jacket with full-length zip

Fabric: 83% Merino wool/15% Protex-M/ 2% antistatic. Weight: 360 g/m².
Size: XS - 3XL
CE: EN ISO 11612 A1 B2 C1
IEC 61482-2 class 1
EN 1149-5

OrderNo: **305577**

Vest with full-length zip and longer back

Fabric certified in accordance with EN ISO 11612 A1 B2 C2, IEC 61482-2 class 1 and EN 1149-5.

Fabric: 83% Merino wool/15% Protex-M/ 2% antistatic. Weight: 360 g/m²
Size: XS - 3XL

OrderNo: **984691**

Trousers without fly

Fabric certified in accordance with EN ISO 11612 A1 B2 C2, IEC 61482-2 class 1 and EN 1149-5.

Fabric: 83% Merino wool/15% Protex-M/ 2% antistatic. Weight: 360 g/m²
Size: XS - 3XL

OrderNo: **308928**

Sports bra

Fabric certified in accordance with EN ISO 11612 A1 B2 C2, IEC 61482-2 class 1 and EN 1149-5. Measurement under/across fullest part of the bust: XS=63-67cm/77-85cm, S=68-72cm/82-94cm, M=73-77cm/87-100cm, L=78-82cm/92-106cm, XL=83-87cm/97-112cm, XXL=88-92cm/102-117cm.

Fabric: 58% Merino wool/40% Protex-M/ 2% antistatic. Weight: 329 g/m².
Size: XS - 2XL

OrderNo: **984700**

Women's boxers

Fabric certified
in accordance with EN ISO 11612 A1 B1 C1 and IEC 61482-2 class 1.

Fabric: 80% Merino wool/20% Protex-M. Weight 210 g/m².
Size: XS - XL

OrderNo: **984664**

Men's boxers

Fabric certified in accordance with EN ISO 11612 A1 B1 C1, IEC 61482-1-2 class 1 and EN 1149-5.

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².
Size: XS - XXXL

OrderNo: **308931**

Thin wool socks

The fabric is certified to EN ISO 11612 A1 B2 C2.

Fabric: 95% wool/ 5% lycra. Weight: 790 g/m².
Size: 36-40, 41-46

OrderNo: **984660**

Ragg wool socks

Fabric certified in accordance with EN ISO 11612 A1 B2 C3.

Fabric: 80% wool/18% polyamide/ 2% elastane. Weight: 840 g/m².
Size: 36-40, 41-46

OrderNo: **984661**

Polo neck warmer

Fabric certified in accordance with EN ISO 14116.

Fabric: 50% Merino wool/50% Protex-M. Weight: 200 g/m².

OrderNo: **984662**

Snood

One size. Fabric certified in accordance with EN ISO 11612 A1 B1 C1, IEC 61482-1-2 class 1 and EN 1149-5.

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².

OrderNo: **984689**

Snood New!

Fabric: 50% cotton, 39% modacrylic, 10% viscose, 1% antistatic, 160 g/m2. Wash at: 40°C.
CE: EN ISO 11612
EN 1149-5
IEC 61482-2

OrderNo: **331193**

Boxer shorts New!

Fabric: 50% cotton, 39% modacrylic, 10% viscose, 1% antistatic, 160 g/m2. Wash at: 40°C.
Size: S - 3XL
CE: EN ISO 11612
EN 1149-5
IEC 61482-2

Best. nr: **331204**

Balaclava New!

Fabric: 50% cotton, 39% modacrylic, 10% viscose, 1% antistatic, 160 g/m2. Wash at: 40°C.
CE: EN ISO 11612
EN 1149-5
IEC 61482-2

OrderNo: **331192**

Balaclava

One size. Fabric certified in accordance with EN ISO 11612 A1 B1 C1, IEC 61482-1-2 class 1 and EN 1149-5.

Fabric: 78% Merino wool/20% Protex-M/ 2% antistatic. Weight: 225 g/m².

OrderNo: **984663**