

SAFETY



SAFETY+






DESIGNED TO PROTECT IN EXTREME ENVIRONMENTS

When it comes to safety, there are simply no shortcuts. The Safety + range is a highly protective range of clothing which has been designed and manufactured to meet specific hazardous workplace environments, so that garments protect against heat, flames, chemical substances, static and other industrial hazards such as welding sparks and arcs. This range not only meets the specific safety certifications required for working in extreme or dangerous environments, but also offers ultimate comfort for all-day wear, all year round.



1288-192 **NEW****SAFETY+ WELDER JACKET****SIZE** XS-6XL**QUALITY** 99% cotton/1% antistatic fibre, 350 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Double button placket and hidden press studs on front
- Longer back
- Outside pockets with button closure
- Vent holes in the back
- Sleeves with button closure
- Flame retardant
- Suitable for industrial laundering



OEKO-TEX®
STANDARD 100
BY Hohenstein



EN ISO 11612:2015



A1 A2 B1 C1 E3 F1

EN ISO 11611:2015



CLASS 2 A1+A2

EN 61482-2:2020



APC 1

EN 1149-5

**COLOURS**

6

2288-192 **NEW****SAFETY+ WELDER TROUSERS****SIZE** EN 44-72 / 21-35 UK 30-52 / S30-S52**QUALITY** 99% cotton/1% antistatic fibre, 350 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Back pocket with reinforcement and flap
- Thigh pocket with box effect
- Ruler pocket
- Knee reinforcement/knee pockets with Velcro bottom closure
- Flame retardant
- Suitable for industrial laundering



OEKO-TEX®
STANDARD 100
BY Hohenstein



EN ISO 11612:2015



A1 A2 B1 C1 E3 F1

EN ISO 11611:2015



CLASS 2 A1+A2

EN 61482-2:2020



APC 1

EN 1149-5



KNEE PADS

**COLOURS**

6

3288-192 **NEW****SAFETY+ WELDER BIB OVERALL****SIZE** EN 44-72 / 21-35 UK 30-52 / S30-S52**QUALITY** 99% cotton/1% antistatic fibre, 350 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Cross pocket in the side
- Elastic back and adjustable elastic braces
- Chest pocket with flap
- Thigh pocket with box effect
- Ruler pocket
- Knee reinforcement/knee pockets with Velcro bottom closure
- Flame retardant
- Suitable for industrial laundering

OEKO-TEX®
STANDARD 100
by Hohenstein

EN ISO 11612:2015



A1 A2 B1 C1 E3 F1

EN ISO 11611:2015



CLASS 2 A1+A2

EN 61482-2:2020



APC-1

EN 1149-5



KNEE PADS

**COLOURS**

6

4288-192 **NEW****SAFETY+ WELDER BOILER SUIT****SIZE** XS-6XL / (S)XS-(S)6XL**QUALITY** 99% cotton/1% antistatic fibre, 350 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Double button placket and hidden press studs on front
- Outside pockets with button closure
- Thigh pocket with box effect
- Vent holes in the back
- Sleeves with button closure
- Flame retardant
- Suitable for industrial laundering

OEKO-TEX®
STANDARD 100
by Hohenstein

EN ISO 11612:2015



A1 A2 B1 C1 E3 F1

EN ISO 11611:2015



CLASS 2 A1+A2

EN 61482-2:2020



APC-1

EN 1149-5



KNEE PADS

**COLOURS**

6

MULTINORM

**ALL MODELS ARE ANTISTATIC AND FLAME RESISTANT,
AND PROTECT AGAINST LIQUID AEROSOLS, SPRAY
AND SPLASHES FROM CHEMICALS**

***For special orders (Additional charge),
these colours can be mixed by choice:**



1234-820*

SAFETY+ MULTINORM JACKET

SIZE XS-6XL

QUALITY 75% cotton/24% polyester/
1% antistatic fiber, 300 g/m²

WASH

- Ingenious and functional details prevent embers from settling
- Double button placket and hidden press studs on front
- Functional pockets, e.g. breast pocket with flap and Velcro
- Sleeves with Velcro closure
- Back pleats for good freedom of movement
- Antistatic and flame retardant
- Suitable for industrial laundering



OEKO-TEX®
STANDARDS 100
by Hohenstein



EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

PrEN 61482-2:2018








APC 1

COLOURS



2234-825*

SAFETY+ MULTINORM TROUSERS

SIZE	EN 44-68 UK 31,5-50,5
QUALITY	75% cotton/24% polyester/ 1% antistatic fiber, 300 g/m ²
WASH	    

- Ingenious and functional details prevent embers from settling
- Cross pockets concealed with flaps
- Back pockets with reinforcement and flaps
- Ruler pocket
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame retardant
- Suitable for industrial laundering



OEKO-TEX®
STANDARD 100
BY HANNOVER



EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018








APC 1

KNEE PADS

**COLOURS**

3234-825*

SAFETY+ MULTINORM BIB OVERALL

SIZE	EN 44-68 UK 31,5-50,5
QUALITY	75% cotton/24% polyester/ 1% antistatic fiber, 300 g/m ²
WASH	    

- Ingenious and functional details prevent embers from settling
- Breast pockets with zipper
- Back pockets with reinforcement and flaps
- Ruler pocket
- Hammer strap
- Knee reinforcement/knee pockets with Velcro bottom closure
- Elastic in back
- Antistatic and flame retardant
- Suitable for industrial laundering



OEKO-TEX®
STANDARD 100
BY HANNOVER



EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018









APC 1

KNEE PADS

**COLOURS**

4234-825*

SAFETY+ MULTINORM BOILER SUIT

SIZE	XS-4XL
QUALITY	75% cotton/24% polyester/ 1% antistatic fiber, 300 g/m ²
WASH	     

- Ingenious and functional details prevent embers from settling
- Sleeves with Velcro closure
- Double button placket with concealed press studs
- Outside and inside pockets
- Reinforced back pockets with flaps
- Hammer strap and ruler pocket
- Back pleats for good freedom of movement
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame retardant
- Suitable for industrial laundering



EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018



APC 1

KNEE PADS

**COLOURS**

1234-820 // 2235-825

1934-820*

SAFETY+ MULTINORM WINTER JACKET**SIZE** XS-6XL**QUALITY** Shell: 75% cotton/24% polyester/
1% antistatic fiber, 300 g/m²
Lining: 100% cotton quilted with
100% polyester nonwoven FR fabric**WASH**

- Ingenious and functional details prevent embers from settling
- Double button placket with concealed press studs and metal zipper at front
- Taped seams
- Flame-resistant quilted lining
- Membrane which prevents water penetration
- Antistatic and flame retardant
- Suitable for industrial laundering

OEKO-TEX®
STANDARD 100
BY HANNOVER, GERMANY

EN ISO 11612:2015



A1 B2 C2 E3 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034+A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 2

TAPED SEAMS

**COLOURS**

7005-150

SAFETY+ MULTINORM SHIRT**SIZE** 37/38-49/50**QUALITY** 60% modacrylic/37% cotton/
3% antistatic fiber, 180 g/m²**WASH**

- Mandarin collar and concealed press stud closure at the front
- Chest pocket with concealed press stud closure
- Back pleats for improved comfort
- Antistatic and flame retardant
- Suitable for industrial laundering

OEKO-TEX®
STANDARD 100
BY HANNOVER, GERMANY

EN ISO 11612:2015



A1 A2 B1 C1 E1 F1

EN 1149-5:2018



FprEN 61482-2:2018

FprAA:2018



APC 1

COLOURS

MULTINORM

**ALL MODELS ARE ANTISTATIC AND FLAME RESISTANT,
AND PROTECT AGAINST LIQUID AEROSOLS, SPRAY
AND SPLASHES FROM CHEMICALS**

For special orders (Additional charge), the contrast fabric (col. 20) can be replaced with one of the following colours:



1235-820

SAFETY+ EN ISO 20471 MULTINORM JACKET

SIZE XS-6XL

QUALITY 75% cotton/24% polyester/
1% antistatic fiber, 300 g/m²

WASH

- Ingenious and functional details prevent embers from settling
- Double button placket and hidden press studs on front
- Functional pockets, e.g. breast pocket with flap and Velcro
- Sleeves with Velcro closure
- Back pleats for good freedom of movement
- Flame-resistant reflectors
- Antistatic and flame retardant
- Suitable for industrial laundering
- Class 2 clothing



OEKO-TEX®
STANDARD 100
by Hohenstein



EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

For EN 61482-2:2018
For AA-2018



APC 1

EN ISO 20471



COLOURS



2235-825

SAFETY+ EN ISO 20471 MULTINORM TROUSERS**SIZE** EN 44-68 / 23-28 / 90-114 UK 31,5-50,5 / S33-S41 / L31,5-L41**QUALITY** 75% cotton/24% polyester/
1% antistatic fiber, 300 g/m²**WASH**

- Ingenious and functional details prevent embers from settling
- Cross pockets concealed with flaps
- Back pockets with reinforcement and flaps
- Ruler pocket
- Knee reinforcement/knee pockets with Velcro bottom closure
- Flame-resistant reflectors
- Antistatic and flame retardant
- Suitable for industrial laundering
- Class 2 clothing

COLOURSOEKO-TEX®
STANDARD 100
by Hohenstein

EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

EN ISO 20471



KNEE PADS



3235-825

SAFETY+ EN ISO 20471 MULTINORM BIB OVERALL**SIZE** EN 44-68 / 22-28 UK 31,5-50,5 / S31,5-S41**QUALITY** 75% cotton/24% polyester/
1% antistatic fiber, 300 g/m²**WASH**

- Ingenious and functional details prevent embers from settling
- Chest pockets with zipper
- Back pockets with reinforcement and flaps
- Ruler pocket and hammer strap
- Knee reinforcement/knee pockets with Velcro bottom closure
- Elastic in back
- Flame-resistant reflectors
- Antistatic and flame retardant
- Suitable for industrial laundering
- Class 2 clothing

COLOURSOEKO-TEX®
STANDARD 100
by Hohenstein

EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

EN ISO 20471








KNEE PADS



4235-825

**SAFETY+ EN ISO 20471
MULTINORM BOILER SUIT**

SIZE	XS-4XL
QUALITY	75% cotton/24% polyester/ 1% antistatic fiber, 300 g/m ²
WASH	    

- Ingenious and functional details prevent embers from settling
- Sleeves with Velcro closure
- Double button placket with concealed press studs
- Functional pockets, e.g. chest pocket with flap and Velcro
- Hammer strap and ruler pocket
- Back pleats for good freedom of movement
- Flame-resistant reflectors
- Antistatic and flame retardant
- Suitable for industrial laundering
- Class 3 clothing

COLOURS

3820



OEKO-TEX®
STANDARDS 100
HIGHEST QUALITY
Standard for textile products
Approved for everyday use



EN ISO 11612:2015



A1 B1 C1 E2 F1

EN ISO 11611:2015



CLASS 1 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

EN ISO 20471








KNEE PADS



1935-820

SAFETY+ EN ISO 20471 MULTINORM WINTER JACKET

SIZE	XS-6XL
QUALITY	Shell: 75% cotton/24% polyester/ 1% antistatic fiber, 300 g/m ² Lining: 100% cotton quilted with 100% polyester nonwoven FR fabric
WASH	    

- Ingenious and functional details prevent embers from settling
- Double button placket with concealed press studs
- Taped seams
- Flame-resistant quilted lining
- Flame-resistant reflectors
- Membrane which prevents water penetration
- Antistatic and flame retardant
- Suitable for industrial laundering
- Class 2 clothing

COLOURS

3820



OEKO-TEX®
STANDARDS 100
HIGHEST QUALITY
Standard for textile products
Approved for everyday use



EN ISO 11612:2015



A1 B2 C2 E2 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 2

EN ISO 20471



TAPED SEAMS



SAFETY+

MULTINORM

1935-820 // 2235-825

MULTINORM INHERENT

ALL MODELS ARE MADE OF ANTISTATIC, FLAME-RESISTANT FABRIC, AND FEATURE INGENUOUS DESIGN DETAILS AT THE POCKETS AND PLEATS WHICH PREVENT EMBERS FROM SETTLING

For special orders (Additional charge)
these colours can be mixed by choice:

6

20

25

38

1284-172

SAFETY+ MULTINORM INHERENT JACKET

SIZE XS-4XL

QUALITY 47% modacrylic/32% cotton/20.5% polyamide/
0.5% antistatic fibers, 320 g/m²

WASH 

- Ingenious and functional details prevent embers from settling
- Double button placket and concealed front zipper
- Longer back
- Back pleats for good freedom of movement
- Outside pockets, e.g. Napoleon pocket
- Sleeves with Velcro closure
- Antistatic and flame resistant
- Suitable for industrial laundering



OEKO-TEX®
STANDARD 100
by Hohenstein



EN ISO 11612:2015



A1 B1 C1 D1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 10034-A1:2009



TYPE 6

For EN 61482-2:2018



APC 1

COLOURS

620

2025

2284-172

SAFETY+ MULTINORM INHERENT TROUSERS**SIZE** EN 44-62 / 22-28 / 90-114 UK 31,5-45,5 / S31,5-S41 / L31,5-L41**QUALITY** 47% modacrylic/32% cotton/20.5% polyamide/
0.5% antistatic fibers, 320 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Back pockets with flap and Velcro closure
- Thigh pocket with inside strap
- Thigh pocket with box effect
- Ruler pocket with flap
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Suitable for industrial laundering

OEKO-TEX®
STANDARD 100
by Hohenheim University
Made in Germany

EN ISO 11612:2015



A1 B1 C1 E1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

KNEE PADS

**COLOURS**

3284-172

SAFETY+ MULTINORM INHERENT BIB OVERALL**SIZE** EN 44-62 / 22-28 / 90-114 UK 31,5-45,5 / S31,5-S41 / L31,5-L41**QUALITY** 47% modacrylic/32% cotton/20.5% polyamide/
0.5% antistatic fibers, 320 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Elastic back and adjustable elastic braces
- Chest pocket with flap and Velcro closure and side pockets with zipper
- Thigh pocket with inside strap
- Thigh pocket with box effect
- Ruler pocket with flap
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Suitable for industrial laundering

OEKO-TEX®
STANDARD 100
by Hohenheim University
Made in Germany

EN ISO 11612:2015



A1 B1 C1 E1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

KNEE PADS

**COLOURS**

4284-172

**SAFETY+ MULTINORM
INHERENT BOILER SUIT**

SIZE	XS-4XL / (S)XS-(S)4XL / (L)XS-(L)4XL
QUALITY	47% modacrylic/32% cotton/20.5% polyamide/ 0.5% antistatic fibers, 320 g/m ²
WASH	

- Ingenious and functional details prevent embers from settling
- Double button placket and concealed front zipper
- Back pleats for good freedom of movement
- Elasticated waist
- Outside pockets, e.g. Napoleon pocket
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Suitable for industrial laundering

COLOURS

EN ISO 11612:2015



A1 B1 C1 E1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

KNEE PADS



Special order

1935-830

**SAFETY+ EN ISO 20471
MULTINORM WINTER JACKET**

SIZE	XS-4XL
QUALITY	31% polyester/28% modacrylic/20% aramid/ 20% viscose FR/1% antistatic fiber, 320 g/m ² Lining: 100% cotton quilted with 100% polyester nonwoven FR fabric
WASH	

- Ingenious and functional details prevent embers from settling
- Double button placket with concealed press studs
- Taped seams
- Flame-resistant quilted lining
- Flame-resistant reflectors
- Membrane which prevents water penetration
- Antistatic and flame retardant
- Class 2 clothing

COLOURS

EN ISO 11612:2008



A1 B1 C1 D0 E1 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 2

EN ISO 20471



TAPED SEAMS



MULTINORM INHERENT

ALL MODELS ARE MADE OF ANTISTATIC, FLAME-RESISTANT FABRIC, AND FEATURE INGENUOUS DESIGN DETAILS AT THE POCKETS AND PLEATS WHICH PREVENT EMBERS FROM SETTLING

For special orders (Additional charge) the contrast fabric (colour 6) can be changed to one of the following:

20

25

38

1285-172

SAFETY+ EN ISO 20471 MULTINORM INHERENT JACKET

SIZE XS-4XL

QUALITY 47% modacrylic/32% cotton/20.5% polyamide/
0.5% antistatic fibers, 320 g/m²

WASH

- Ingenious and functional details prevent embers from settling
- Double button placket and concealed front zipper
- Longer back
- Back pleats for good freedom of movement
- Outside pockets, e.g. Napoleon pocket
- Antistatic and flame resistant
- Flame-resistant reflectors
- Suitable for industrial laundering
- Class 2 clothing



OEKO-TEX®
STANDARDS 100
MADE IN GERMANY



EN ISO 11612:2015



A1 B1 C1 D1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-41:2009



TYPE 6

FpEN 61482-2:2018



APC 1


EN ISO 20471



COLOURS



2285-172

**SAFETY+ EN ISO 20471 MULTINORM
INHERENT TROUSERS****SIZE** EN 44-64 / 22-28 / 90-114 UK 31,5-47 / S31,5-S41 / L31,5-L41**QUALITY** 47% modacrylic/32% cotton/20.5% polyamide/
0.5% antistatic fibers, 320 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Ergonomically shaped knees
- Back pockets with flap and Velcro closure
- Thigh pocket with inside strap
- Thigh pocket with box effect
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Flame-resistant reflectors
- Suitable for industrial laundering
- Class 2 clothing

COLOURS

EN ISO 11612:2015



A1 B1 C1 E1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

EN ISO 20471



KNEE PADS



3285-172

**SAFETY+ EN ISO 20471 MULTINORM
INHERENT BIB OVERALL****SIZE** EN 44-62 / 22-28 / 90-114 UK 31,5-45,5 / S31,5-S41 / L31,5-L41**QUALITY** 47% modacrylic/32% cotton/20.5% polyamide/
0.5% antistatic fibers, 320 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Ergonomically shaped knees
- Elastic back and adjustable elastic braces
- Chest pocket with flap and Velcro closure and side pockets with zipper
- Thigh pocket with box effect
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Flame-resistant reflectors
- Suitable for industrial laundering
- Class 2 clothing

COLOURS

EN ISO 11612:2015



A1 B1 C1 E1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-A1:2009



TYPE 6

FprEN 61482-2:2018

FprAA:2018



APC 1

EN ISO 20471



KNEE PADS



4285-172

**SAFETY+ EN ISO 20471 MULTINORM
INHERENT BOILER SUIT****SIZE** XS-4XL / (S)XS-(S)4XL / (L)XS-(L)4XL**QUALITY** 47% modacrylic/32% cotton/20.5% polyamide/
0.5% antistatic fibers, 320 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Double button placket and concealed front zipper
- Back pleats for improved comfort
- Elasticated waist
- Functional pockets, e.g. thigh pocket with box effect and loose bottom
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Flame-resistant reflectors
- Suitable for industrial laundering
- Class 3 clothing

COLOURSDEKO-TEK®
STANDARD ISO
9001:2015

EN ISO 11612:2015



A1 B1 C1 E1 E3 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034+A1:2009



TYPE 6

Fpr EN 61482-2:2018



APC 1

EN ISO 20471



KNEE PADS



Special order



1285-172 // 2285-172 // 3285-172

MULTINORM INHERENT

ALL MODELS ARE MADE OF ANTISTATIC, FLAME-RESISTANT FABRIC, AND FEATURE INGENUOUS DESIGN DETAILS AT THE POCKETS AND PLEATS WHICH PREVENT EMBERS FROM SETTLING

For special orders (Additional charge), the fluorescent fabric in colour 10, 38 or 47 can be combined with a contrast fabric in a choice of colours:



1285-830

SAFETY+ EN ISO 20471 MULTINORM INHERENT JACKET

SIZE XS-4XL

QUALITY 31% polyester/28% modacrylic/20% aramid/
20% viscose FR/1% antistatic fiber, 320 g/m²

WASH 

- Ingenious and functional details prevent embers from settling
- Double button placket and concealed front zipper
- Longer back
- Back pleats for good freedom of movement
- Outside pockets, e.g. Napoleon pocket
- Sleeves with Velcro closure
- Antistatic and flame resistant
- Flame-resistant reflectors
- Class 2 clothing



OEKO-TEX®
STANDARD 100
by Hohenstein

EN ISO 11612:2015



A1 B1 C1 E1 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



TYPE 6

EN 13034-41:2009



APC 1

For EN 61482-2:2018
For EN 61482-2:2018



EN ISO 20471

EN ISO 20471 2



COLOURS



2285-830

**SAFETY+ EN ISO 20471 MULTINORM
INHERENT TROUSERS****SIZE** EN 44-62 / 22-28 / 90-114 UK 31,5-45,5 / S31,5-S41 / L31,5-L41**QUALITY** 31% polyester/28% modacrylic/20% aramid/
20% viscose FR/1% antistatic fiber, 320 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Back pockets with flap and Velcro closure
- Thigh pocket with inside strap
- Thigh pocket with box effect
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Flame-resistant reflectors
- Class 2 clothing

OEKO-TEX®
STANDARD 100
BY HANNOVER

EN ISO 11612:2015



A1 E1 C1 E1 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-41:2009



TYPE 6

Fpr-EN 61482-2:2018



APC 1

EN ISO 20471



2

KNEE PADS

**COLOURS**

3285-830

**SAFETY+ EN ISO 20471 MULTINORM
INHERENT BIB OVERALL****SIZE** EN 44-62 / 22-28 / 90-114 UK 31,5-45,5 / S31,5-S41 / L31,5-L41**QUALITY** 31% polyester/28% modacrylic/20% aramid/
20% viscose FR/1% antistatic fiber, 320 g/m²**WASH** 

- Ingenious and functional details prevent embers from settling
- Elastic back and adjustable elastic braces
- Chest pocket with flap and Velcro closure and side pockets with zipper
- Thigh pocket with inside strap
- Thigh pocket with box effect
- Knee reinforcement/knee pockets with Velcro bottom closure
- Antistatic and flame resistant
- Flame-resistant reflectors
- Class 2 clothing

OEKO-TEX®
STANDARD 100
BY HANNOVER

EN ISO 11612:2015



A1 E1 C1 E1 F1

EN ISO 11611:2015



CLASS 2 A1

EN 1149-5:2018



EN 13034-41:2009



TYPE 6

Fpr-EN 61482-2:2018



APC 1

EN ISO 20471



2

KNEE PADS

**COLOURS**

7255-284

SAFETY+ UNDERSHIRT**SIZE** XS-6XL**QUALITY** 60% modacrylic/39% viscose/
1% antistatic fiber, 170 g/m²**WASH** 

- Long sleeves
- Soft and breathable
- Ribbed neck and sleeves
- Takes up minimal space under daily clothing



EN ISO 11612:2015



A1 B1 C1 F1

EN 1149-5:2018



TESTED AFTER

50
WASHES**COLOURS**

20

7256-284

SAFETY+ LONG UNDERPANTS**SIZE** XS-6XL**QUALITY** 60% modacrylic/39% viscose/
1% antistatic fiber, 170 g/m²**WASH** 

- Elasticated waistband
- Soft and breathable
- Ribbed hem at foot
- Takes up minimal space under daily clothing



EN ISO 11612:2015



A1 B1 C1 F1

EN 1149-5:2018



TESTED AFTER

50
WASHES**COLOURS**

20

8255-286

SAFETY+ SWEATSHIRT**SIZE** XS-6XL**QUALITY** 60% modacrylic/38% cotton/
2% antistatic fiber, 280 g/m²**WASH**

- Ideal for under the work jacket
- Ribbed neck and sleeves
- Can be worn with trousers instead of the work jacket



OEKO-TEX®
STANDARDS 100
BY HANNOVER

EN ISO 11612:2015



AT B1 C1 F1

EN 1149-5:2018



FprEN 61482-2:2018
FprAA:2018



APC 1

TESTED AFTER

**COLOURS**

20

9255-287

SAFETY+ POLOSHIRT**SIZE** XS-6XL**QUALITY** 55% modacrylic/43% cotton/
2% antistatic fiber, 220 g/m²**WASH**

- Ribbed collar and concealed button fastening
- Ribbed sleeves
- Ideal for under the work jacket
- Can be worn with trousers instead of the work jacket



OEKO-TEX®
STANDARDS 100
BY HANNOVER

EN ISO 11612:2015



AT B1 C1 F1

EN 1149-5:2018



FprEN 61482-2:2018
FprAA:2018



APC 1

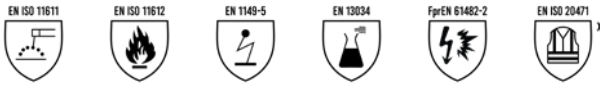
TESTED AFTER

**COLOURS**

20

INSTRUCTIONS FOR USE

EN ISO 11611, EN ISO 11612, EN 1149-5, EN 13034, FprEN 61482-2 and EN ISO 20471.



See the item's care label for certified standard(s) and classification.

GENERAL USER INFORMATION

- At today's workplaces, several different hazardous situations and accidents can occur simultaneously. We have therefore selected a multi-functional fabric that has fire-retardant and antistatic properties, and is resistant to electrical arc flashes.
- Protective clothing for workers exposed to heat and produced to the above standards is flame-retardant in the event of accidental contact with flames.
- Safety+ may only be used as a combination of a jacket or shop coat with trousers or bib overalls with the same or a higher classification.
- The boiler suit is the only garment that may be used separately without wearing a jacket or shop coat.
- When worn, the clothing should be fully fastened for full protection.
- The protective properties of the workwear are effective only when the clothing is worn correctly.
- We recommend that you try the protective clothing before making your final choice.
- Ordinary wear and tear, washing and any contamination may affect and/or reduce the flame-limiting and electrostatic properties of the clothing.
- If the user experiences sunburn-like symptoms of UVB penetration the clothing should be repaired if possible or replaced, and the use of additional more resistant protective layers should be considered in future.
- To ensure optimum product life, wash and maintain according to the wash and care instructions.
- Metals in clothing, for example buttons and threads (used for antistatic effects), should obviously be avoided. Voltage can be transferred from clothing to the body, causing an electric shock. External metal buttons must also be avoided as they can cause short-circuiting.
- Additional protective equipment may also be required
- The protective clothing is designed so it can be quickly removed.
- The clothes can be disposed together with normal refuse collection or combustion.
- The clothing protects the wearer only from momentary and accidental contact with electrical arc flashes. We recommend an extra insulating layer of clothing where there is increased risk of electric shock.
- Clothing produced in accordance with the mentioned norms is designed to protect the wearer from momentary and accidental contact with current-conducting components up to max. 100 V d.c.
- Available sizes for upperparts from size XS to min 4XL and underparts from size 72 to min. 116.

Chest width in cm for each size		Waist width in cm for each size					
XS	= 88 cm	72	= 72 cm	K80	= 80 cm	L80	= 80 cm
S	= 94 cm	76	= 76 cm	K84	= 84 cm	L84	= 84 cm
M	= 100 cm	80	= 80 cm	K88	= 88 cm	L88	= 88 cm
L	= 106 cm	84	= 84 cm	K92	= 92 cm	L92	= 92 cm
XL	= 112 cm	88	= 88 cm	K96	= 96 cm	L96	= 96 cm
2XL	= 118 cm	92	= 92 cm	K100	= 100 cm	L100	= 100 cm
3XL	= 124 cm	96	= 96 cm	K104	= 104 cm	L104	= 104 cm
4XL	= 130 cm	100	= 100 cm	Body height 170-175 cm		Body height 180-194 cm	
Body height 170-194 cm		104	= 104 cm				
		108	= 108 cm				
		112	= 112 cm				
		116	= 116 cm				
		Body height 175-185 cm					

EN ISO 11611: 2015 PROTECTION DURING WELDING AND SIMILAR PROCESSES

- The clothing gives a limited protection of the wearer against flames, molten metal splash, radiant heat and short term accidental electrical contact.
- The spark-resistant effect of protective clothing may be quickly cancelled out if worn with items of clothing that are easily flammable. It is therefore important that shirts, T-shirts and outdoor clothes are all flame-resistant. As for underwear, we recommend pure cotton, and not synthetic materials like polyester and polypropylene.
- Guidelines for choosing the correct EN ISO 11611 classification: class 1 = gas welding, TIG, MIG, microplasma, spot welding, brazing and MMA welding (using a shielded electrode). Environmental conditions: Operating oxygen and/or plasma cutters, resistance welding equipment, thermal welding equipment and welding tables.

- Guidelines for choosing the correct EN ISO 11611 classification: class 2 = MMA welding (using normal or cellulose electrodes), MAG welding (with CO₂ or mixed gasses), MIG (high-voltage) welding, arc welding, plasma cutting, gouging, oxygen cutting and thermal spraying. Environmental conditions: Working in enclosed spaces or welding/cutting above head height or in comparable difficult positions.
- When welding, an increase in the oxygen content of the air will reduce the flame-limiting properties of the protective clothing. Care should be taken when welding in confined spaces, where the atmosphere may become enriched with oxygen.
- Additional body protection may be required, e.g. when welding above head height.
- To ensure optimum product life, wash and maintain according to the wash and care instructions.
- The electrical insulating effect of the protective clothing will be reduced by perspiration, water, moisture and soiling.

EN ISO 11611	FLAME SPREADING	
A1	Surface ignition	
A2	Edge ignition	
EN ISO 11611	CLASS 1	CLASS 2
Splash	15 drops	25 drops
Radiant heat RHTI transfer index	≥ 7 sek.	≥ 16 sek.

EN ISO 11612: 2015 PROTECTION AGAINST HEAT AND FLAME

- The flame-retardant effect of protective clothing can quickly be cancelled out if it is worn with items of clothing that are easily flammable. It is therefore important that shirts, T-shirts and outdoor clothes are all flame-resistant. As for underwear, we recommend pure cotton or flame resistant materials and not synthetic materials like polyester and polypropylene.
- Warning: If clothing is worn directly against the skin, there is still a risk of burns if liquid metal spatter comes into contact with the protective clothing.
- For products marked with code letter D protection against aluminium spatter, the user must leave the area and immediately remove the garment if aluminium spatter occurs.
- The flame-limiting properties will be less effective if the protective clothing is contaminated with flammable materials.
- To ensure optimum product life, wash and maintain according to the wash and care instructions.

EN ISO 11612	FLAME SPREADING	
A1	Surface ignition	
A2	Edge ignition	
EN ISO 11612	HTI 24 VALUE (DEFINED IN ISO 9151)	
Convective heat in secs.	Min.	Max.
B1	4	<10,0
B2	10	<20,0
B3	20	
EN ISO 11612	RHTI 24 VALUE (DEFINED IN ISO 6942)	
Radiant heat in secs.	Min.	Max.
C1	7	20
C2	20	50
C3	50	<95,0
C4	95	
EN ISO 11612	MOLTEN ALUMINIUM SPATTER (G)	
	Min.	Max.
D1	100	<200
D2	200	<350
D3	350	
EN ISO 11612	MOLTEN IRON SPATTER (G)	
	Min.	Max.
E1	60	<120
E2	120	<200
E3	200	
EN ISO 11612	CONTACT HEAT IN SEC. THRESHOLD VALUE	
	Min.	Max.
F1	5	<10
F2	10	<15
F3	15	

The product has not been tested in accordance with EN343 Wxx

EN 1149-5:2018 ELECTROSTATIC PROPERTIES – PART 5: MATERIAL PERFORMANCE AND DESIGN REQUIREMENTS

- The person wearing the electrostatic dissipative clothing shall be properly earthed. The resistance between the person's skin and earth shall be less than $10^6 \Omega$ e.g. by wearing adequate footwear on dissipative or conductive floors.
- Electrostatic dissipative protective clothing shall not be open or removed whilst in presence of flammable or explosive atmospheres or while handling flammable or explosive substances.
- Electrostatic dissipative protective clothing is intended to be worn in Zones 1, 2, 20, 21 and 22 (see EN 60079-10-1 [7] and EN 60079-10-2 [8]) in which the minimum ignition energy of any explosive atmosphere is not less than 0.016 mJ.
- Electrostatic dissipative protective clothing shall not be used in oxygen enriched atmospheres, or in zone 0 (see EN 60079-10-1 [7]) without prior approval of the responsible safety engineer.
- The electrostatic dissipative performance of the electrostatic dissipative protective clothing can be affected by wear and tear, laundering and possible contamination
- Electrostatic dissipative protective clothing shall be worn in such a way that it permanently covers all non-complying materials during normal use (including bending movements).
- Metals in clothing, for example buttons and threads (used for antistatic effects), should obviously be avoided. Voltage can be transferred from clothing to the body, causing an electric shock. Exposed metal buttons must also be avoided as they can cause short-circuiting.
- When properly earthed, the protective clothing possesses antistatic properties as per EN 1149-5, and is suitable for use in explosive atmospheres (ATEX) (except oxygen-enriched flammable atmospheres).

EN 13034+A1:2009 PROTECTION FROM LIQUID CHEMICALS

- The clothing protects the wearer from a number of different chemicals. EN 13034+A1:2009 tests the following: H_2SO_4 , 30% class 3/3, NaOH 10% class 3/2, O-xylène No class, Butanol-I No class.
- The fabric is subjected to the following tests: Dimensional stability; approved, wear resistance: Class 3, diagonal tear resistance: Class 2; tensile strength: Class 5, penetrati on test: Class 2.
- Not suitable for use in areas where oxygen content exceeds 21% without the approval of the safety officer.
- In case of an accident involving liquid chemicals or flammable liquids, the affected clothing must be removed immediately and disposed of without coming into contact with the skin.
- To reactivate the chemical-repellent properties of the fabric (EN 13034+A1:2009), the garments should be re-treated by means of tunnel-finishing or tumble-drying at 90 °C (see ISO 15797 8A)
- Re-treat after every fifth wash with HYDROB FC to meet EN13034+A1:2009 requirements.
- We recommend that the garments' protective properties are tested before re-use to ensure the full level of protection is maintained.

EN 13034	REPELLENCY INDEX	PENETRATION INDEX
Class 1	> 95%	< 1%
Class 2	> 90%	< 5%
Class 3	> 80%	< 10%

EN 13034	ABRASION RESISTANCE (CYCLES)	TRAPEZOIDAL TEAR RESISTANCE (N)	TENSILE STRENGTH (N)	PUNCTURE RESISTANCE (N)
Class 1	> 10	> 10	> 30	> 5
Class 2	> 500	> 20	> 60	> 10
Class 3	> 100	> 40	> 100	> 50
Class 4	> 1000	> 60	> 250	> 100
Class 5	> 1500	> 100	> 500	> 150
Class 6	> 200	> 150	> 1000	> 200

FprEN 61482-2:2018/FprAA:2018 PROTECTS AGAINST THERMAL HAZARDS OF AN ELECTRIC ARC

Warning! Not all current-conducting parts of arc installations can be insulated against direct contact.

- The environmental conditions and the risks at the working site shall be regarded.
- Deviations from the parameters in this document may result in more severe conditions.
- Protective clothing shall be worn in the closed state.

- Protective clothing according to this standard is not intended to be used as electrical insulating protective clothing and does not provide protection against electric shock.
- Protective clothing that becomes contaminated with grease, oil or flammable liquids or combustible materials should not be used.
- Protective clothing that is damaged to the extent that its protective qualities are impaired (e.g. holes in garment, not functioning closures) should not be used.
- For full body protection suitable additional protective equipment (helmet with protective face screen, protective gloves, and footwear (boots)) shall be used.
- No garments like shirts, undergarments or underwear made of for example polyamide, polyester or acrylic fibres which melts under arc exposures, should be used.
- The clothing must be stored in a dry, dark and well-ventilated room.
- In the event of tearing or other damage, the clothing must not be repaired by the wearer.

FprEN 61482-2	MEAN ELECTRICAL ARC CAPACITY W _{arc} (kJ)	DOUBLE STANDARD DEVIATION [kJ]
Class 1	158	± 34
Class 2	318	± 44

FprEN 61482-2	MEAN ENERGY EFFECT E _{io} [kJ/m ² ·cal/cm ²]	DOUBLE STANDARD DEVIATION [kJ/m ² ·cal/cm ²]
Class 1	135 (3,2)	± 56 (1,3)
Class 2	423 (10,1)	± 78 (1,9)

EN ISO 20471: PROTECTION & CLASSIFICATION

- Several items of Safety+ EN ISO 20471 clothing can be worn together for greater visibility.
- A class 3 garment must meet the following: Safety Class 2 top must be worn with an Safety Class 2 pants or bib-pants with two reflectors.
- Safety+ EN ISO 20471 protective clothing is CE-approved and approved in accordance with EN ISO 20471. The upper figure (X) in the pictogram indicates its class and the lower figure (Y) refers to its reflective value. The class of the safety clothing indicates the minimum requirements of fluorescent and reflective material required on the safety clothing.
- Protection may be reduced when the clothing is dirty.
- See washing instructions for fabric qualities and classification.

CLASS	FLUORESCENT MATERIAL	REFLECTIVE MATERIAL
Class 3	0.8 m ²	0.2 m ²
Class 2	0.5 m ²	0.13 m ²
Class 1	0.14 m ²	0.10 m ²

"This product conforms to the Council Regulation (EU) 2016/425"

ENGEL Protective clothing is type-approved by: EU-notified body no. 0200:
FORCE Certification A/S, Park Allé 345, DK-2605 Brøndby.



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