



ESD Safe Line

**Workwear with no static charge for
industrial ESD workplaces**

Published by:

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Dreieich Plaza 1A
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Germany



If the humidity in working spaces is less than 20%, employees can become statically charged with up to 35,000 volts. The possible charge only drops to below 1,500 volts in very humid working environments where the humidity is above 65%.



Electronic components can suffer microscopic damage following contact with an electrostatic discharge starting at just 35 volts. Unfortunately, that is a voltage that we humans cannot even register. The charge of our own bodies only becomes perceptible as of approx. 3,000 volts or in the case of unexpected electric shocks (discharges), for example when touching a metal door handle.

Protect your products from the costly consequences of ESD damage.

Face this invisible danger with fully functioning ESD workwear from the specialist!

It cannot be seen and is also not usually noticed by people, yet it represents one of the greatest risks for electronic equipment, assemblies and components: electrostatic discharge (ESD).

Around 42 per cent of all equipment failures involving

ESD-sensitive components can be traced to damage caused by electrostatic discharges.* This comparatively high value can be explained by the fact that ESD damage often goes unnoticed, even by specialist staff, and is not always registered even during a function test. After all, often “merely” preliminary damage is sustained, which only becomes evident in the form of malfunctions during the long-term operation of a device and subsequently forms the subject of a complaint.

ESD workwear is a fundamental means of protecting components and is among the most important safety precautions that companies can implement alongside the creation of electrostatic-protected areas and workplaces. People without special ESD workwear cause an electrostatic charge.

ESD workwear is not only professionally washed in our laundries, but also, and most importantly, checked by specially trained members of staff.

If any damage is identified on the workwear, the areas are repaired whenever possible. If repairs are not possible due to the garment's protective characteristics, it is automatically replaced.

We keep different sizes, lengths and colour versions of all items of clothing in stock in order to be able to provide customers with replacement garments on a rapid and flexible basis. This maintained stock is not only advantageous to you in the case of irreparable damage, but also in the case of staff changes.

Benefit from our specialised processes for technical textiles, especially with regard to water, temperature and chemicals.

* Study conducted by ESD-Akademie GmbH in Dierdorf, Germany, on 1.2 million newly produced electronic components (2016)

ESD Safe Line

Lightweight, breathable and with conductive, carbonised fibres for reliable product protection

The highlights of our ESD Safe Line include conductive, carbonised fibres and an extremely light fabric. The ESD workwear offers wearers two great advantages: compared with conductive metal fibres, the allergy potential of carbon fibres is many times lower. In addition, carbon fibres cannot break – meaning potential short circuits can be ruled out.

The ESD workwear is made from CONDUCTEX®, one of the lightest and most comfortable materials available

Benefit from:

- High-performance protective clothing
- Excellent wearing properties
- Extremely sturdy and durable clothing with a low textile weight
- Controlled, rapid conduction away of electrostatic charges even at low voltage (from 100 volts upwards)

Protects electronic components against electrostatic phenomena:

- Prevents both electrical charging and high particle shedding
- Complies with the requirements of the EN 61340-4-9 standard



when it comes to protecting products from electrostatic discharge.

The cuffs and side seams of the ESD Safe Line garments are finished with conductive fibres in order to connect the conductive fibres running in parallel to each other.

The light textile weight of the ESD Safe Line contributes to a high feeling of well-being. This is an important aspect if the ESD workwear is worn directly against the skin.

- Fabric with "Breathable" quality label from the Hohenstein testing institute
- Additionally bound joining seams
- Clearly visible embroidered EPA logo

Available as:

1. ESD polo shirt or ESD T-shirt – recommended in combination with the ESD waistband trousers available in a matching colour.
2. ESD coat with long or short sleeves, which can be worn over own clothing or workwear. All ESD coats cover the thighs during seated work.



EN 61340-4-9



Recommended for:

The manufacturing of electronic (complete) devices, assemblies, printed circuit boards, inductive components (e.g., magnetic coils), systems, etc., as well as during the assembly/installation of electrical equipment and testing of assemblies.



Combines ideally with regular workwear from **CWS Workwear**; choose from a range of different textile qualities and colours.



ESD workwear is part of an ESD system and is worn in companies with electrostatic-protected areas (EPA).

ESD Safe Line

Long-sleeved men’s coat



White: 1001793 Light grey: 1006038 Blue: 1001798 Light blue: 1006039

Special features

- Long coat, ideal for seated work
- Straight cut without side seams
- Lapel collar
- Front closes with press studs concealed on one side
- Long set-in sleeves
- Adjustable cuff with press stud
- 1 patch breast pocket on left
- 2 patch side pockets with slanted openings
- EPA embroidered emblem on upper left arm

Material: CONDUCTEX®
(75% polyester | 23% cotton | 2% carbon fibres)
130 g/m²

Sizes
2XS-4XL

ESD Safe Line

Short-sleeved men’s coat



White: 1001802

Special features

- Long coat, ideal for seated work
- Straight cut without side seams
- Lapel collar
- Front closes with press studs concealed on one side
- Short set-in sleeves
- Hemmed short sleeve
- 1 patch breast pocket on left
- 2 patch side pockets with slanted openings
- EPA embroidered emblem on upper left arm

Material: CONDUCTEX®
75% polyester | 23% cotton | 2% carbon fibres
130 g/m²

Sizes
2XS-4XL

ESD Safe Line

Long-sleeved ladies’ coat



White: 1001794 Light grey: 1006041 Blue: 1001799

Special features

- Long coat, ideal for seated work
- Straight cut without side seams
- Bust darts
- Lapel collar
- Front closes with press studs concealed on one side
- Long set-in sleeves
- Adjustable cuff with press stud
- 1 patch breast pocket on left
- 2 patch side pockets with slanted openings
- EPA embroidered emblem on upper left arm

Material: CONDUCTEX®
75% polyester | 23% cotton | 2% carbon fibres
130 g/m²

Sizes
2XS-4XL

ESD Safe Line

Short-sleeved ladies’ coat



White: 1001800

Special features

- Long coat, ideal for seated work
- Straight cut without side seams
- Bust darts
- Lapel collar
- Front closes with press studs concealed on one side
- Short set-in sleeves
- 1 patch breast pocket on left
- 2 patch side pockets with slanted openings
- EPA embroidered emblem on upper left arm

Material: CONDUCTEX®
75% polyester | 23% cotton | 2% carbon fibres
130 g/m²

Sizes
2XS-4XL

ESD Safe Line

Long-sleeved men’s coat



White:
1006040

Special features

- Long coat with knitted cuffs, ideal for highly sensitive components, suitable for all seated work
- Straight cut without side seams
- Lapel collar
- Front closes with press studs concealed on one side
- Long set-in sleeves with stretchy knitted cuffs
- 1 patch breast pocket on left
- 2 patch side pockets with slanted openings
- EPA embroidered emblem on upper left arm

Material: CONDUCTEX®
75% polyester | 23% cotton | 2% carbon fibres
130 g/m²

Sizes
2XS-4XL

ESD Safe Line

T-shirt



Light grey: 1006043
Dark blue: 1006044
Blue: 1001795
Black: 1001796

Special features

- Modern shirt length, suitable for wearing over other clothing
- Comfortable neck width, elasticated crew neck collar
- Straight cut
- Short, plain sleeves
- EPA logo on upper left arm

Material: CONDUCTEX®
95% cotton | 5% carbon fibres
160 g/m²

Sizes
XS-4XL

ESD Safe Line

Waistband trousers



Dark grey: 1006383
Dark blue: 1006382

Special features

- Extremely resilient twill material with outstanding colour consistency and high wearing comfort
- Close-fitting cut with ergonomic knee region
- Waistband with button
- Fly with concealed zip
- 2 side pockets
- 1 patch back pocket on right
- 1 extra-reinforced patch folding rule pocket with loose hanging pocket bottom on right
- 1 spacious leg pocket with flap and concealed press studs on left
- Waistband with belt loops and elasticated back for better fit

Material: Superbandmaster ESD
66.5% polyester | 32% cotton | 1.5% carbon fibres
215 g/m²

Sizes
38-72 | 88-122 | 19-33w

ESD Safe Line

Polo shirt



Light grey/ dark blue: 1001791
Blue/light grey: 1001792
Black/light grey: 1001797

Special features

- Modern shirt length, suitable for wearing over other clothing
- Straight cut
- Conductive polo collar in trim colour
- Polo placket with 3 buttons
- Breast pocket with button on left
- Short sleeve with trim panel on hem
- EPA logo on upper left arm

Material: CONDUCTEX® Blended Cotton Knit
48% cotton | 48% polyester | 4% carbon fibres
170 g/m²

Sizes
S-3XL

CWS Workwear’s service

At CWS Workwear, you receive high-quality ESD workwear in combination with a professional and all-inclusive service. With our standardised and certified washing, reprocessing and checking processes, we ensure for

all our locations that ESD workwear reprocessed by CWS is not statically charged when it is delivered to your premises.



There is more to come

Colleagues swift shifts, do this job today and that one tomorrow, work indoors and outdoors: CWS Workwear offers you an extensive range of personal protective

equipment (PPE), industrial and trade clothing, protective clothing for welders and t-shirts, polo shirts, sweatshirts, shirts, softshell jackets and trousers.

Please ask your CWS customer consultant about our other catalogues and offers.



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