



Made in the  
United States of America

# Heavy Duty Cotton Poly ESD Smocks Installation and Maintenance



Figure 1. Desco Heavy Duty Cotton Poly ESD Smocks

## Description

Desco Heavy Duty Cotton Poly ESD Smocks is a Static Control Garment with  $R_{tg} < 1 \times 10^{11}$  ohms meeting the required limits of ANSI/ESD S20.20 when tested per ANSI/ESD STM2.1 or ESD TR53.

“Garments are intended to attenuate electrostatic fields that may be present on personnel clothing. ... While a person may be grounded using a wrist strap or other grounding methods, that does not mean that insulative clothing fabrics can dissipate a charge to that person’s skin and then to ground. Personnel clothing usually is electrically separate or isolated from the body.” (ESD TR20.20-2008 section 5.3.13.1)

Outfitting a work force in Heavy Duty Cotton Poly ESD Smocks is the single most powerful step to demonstrate a company’s commitment to their ESD control program.

Garments can also be very important in field work, as the area may be an uncontrolled environment which can be very dry.

Desco Heavy Duty Cotton Poly ESD Smocks are designed to be antistatic, low tribocharging and offer protection to ESD sensitive items from electrostatic fields generated by clothing on the user’s body.

The Heavy Duty Cotton Poly ESD Smocks create a Faraday Cage around the torso of the wearer that shield ESD susceptible items from static charges generated on the wearers’ clothing.

The Heavy Duty Cotton Poly ESD Smocks are constructed of a heavy weight cotton/poly blend with a minimum of 1% conductive fiber providing continuous and consistent charge dissipation. All of the seams

in the garment are designed to maintain electrical continuity from panel to panel and from sleeve to sleeve in accordance with the ESD Association Garment Standard, ANSI/ESD STM2.1. The smocks include a snap socket on each cuff.

Heavy Duty Cotton Poly ESD Smocks are available in

Item	Size	Chest	Sleeve
<a href="#">73505</a>	Small	34" - 36"	34"
<a href="#">73506</a>	Medium	38" - 40"	34" - 3/8"
<a href="#">73507</a>	Large	42" - 44"	35"
<a href="#">73508</a>	X Large	46" - 48"	35" - 1/2"
<a href="#">73509</a>	2X Large	50" - 52"	35" - 1/2"

## Instructions for use

Follow these directions for proper installation and grounding of the Heavy Duty Cotton Poly ESD Smocks:

Put on the garment, fastening all the press studs on the front of the smock; ensure no clothing is exposed outside of the smock. Note: EN 61340-5-1 paragraph 5.2.5 Garments “Coats, jackets, smocks and overalls shall completely cover all clothing in the area of the arms and torso.

“Garments that become worn or damaged should be repaired or replaced by a qualified source to ensure the electrical integrity of the seams. Once the repair is made, the periodic test described above, should be conducted to validate the repair.” (ESD TR20.20-2008 section 5.3.13.4.1 Repairs)

“For personnel safety, static control garments should not be worn in situations where there is exposure to high voltage. Regular laundering of static control garments according to the manufacturer’s recommendation is suggested to make sure conductive fibers do not become contaminated and rendered insulative. After laundering, thorough rinsing of the garment will help eliminate the possible buildup of chemicals on the conductive fibers, which can cause them to become insulative. Drying garments at high temperatures may degrade conductive fibers in fabrics used to manufacture garments.” (ESD TR20.20-2008 section 5.3.13.6 Other Considerations)

## Specifications

Fabric Weight	5 ounces/sq yard
Fabric Content	Texturized polyester (65%), cotton (34%) and a minimum of 1% conductive fibers.
Surface Resistance of Fabric	Rpp < 1 x 10 <sup>9</sup> ohms per ANSI/ESD STM2.1
Static Decay Rate	5000 volts to 500 volts in less than 0.1 seconds, per FTMS-101C

### Limited Warranty, Warranty Exclusions, Limit of Liability and RMA Request Instructions

See the Desco Warranty - [Desco.com/Limited-Warranty.aspx](https://www.desco.com/Limited-Warranty.aspx)

## Compliance Verification Testing

Panel to panel conductivity is essential and easy to test using our Digital Surface Resistance Meter Item #19290, by placing 5 pound electrodes on different panels. For additional information, refer to ANSI/ESD S20.20, ESD TR20.20, the ESD Association Garment Standard, ANSI/ESD STM2.1, and Compliance Verification ESD TR53.

## Maintenance

For proper operation, ESD garments must be laundered periodically. Woolite works well. Liquid detergents are better than dry in that there is less caking and frictional wear. Launder garment in cool or warm water, tumble dry with low heat or hang dry. In terms of laundering the smocks by hand or with a washing machine, most prefer using a washing machine. This works well if using a standard house machine on gentle cycle. Industrial machines are fine if "Pony" (typically under 200 pound loads) machines are used. It is not recommended to launder these garments in heavy industrial laundry machines as it will lead to premature wear. Garments should be tumbled dry using low heat. DO NOT BLEACH.

The conductive fibers are sensitive to heat and should not be exposed to laundering heat in excess of 120°F. Use only non-ionic softeners and detergents when laundering. Under normal wearing and recommended washing conditions, Desco Heavy Duty Cotton Poly ESD Smocks will maintain their usefulness and effectiveness for a minimum of 50 washings.