

DESCO TECHNICAL BULLETIN TB-3082

Statshield® Smocks with Convertible Sleeves Grounding, Testing, and Maintenance



Made in the
United States of America



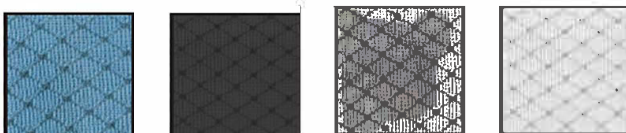
Figure 1. Desco Statshield® Smocks with Convertible Sleeves and Snaps Cuffs.

Description

Desco Statshield® Smocks with Convertible Sleeves are designed to be antistatic, low tribocharging, and create a Faraday Cage around the torso and arms of the wearer to protect ESD susceptible items from electrostatic fields generated by clothing on the operator's clothing. Static control garments are intended to attenuate electrostatic fields that may be present on personnel clothing. Statshield® Smocks meet the requirement for Groundable Static Control Garment System per ANSI/ESD S20.20 required limit of $< 3.5 \times 10^7$ ohm R_{tg} tested per ANSI/ESD STM2.1 and ESD TR53 ($23^\circ \pm 1^\circ$ C, $12\% \pm 3\%$ RH, and $50\% \pm 5\%$ RH).

Statshield® smocks are constructed of a lightweight dissipative material which made from texturized polyester and a minimum of 9% carbon nylon monofilament. The conductive nylon fibers are woven in a chain-link design throughout the material, providing continuous and consistent charge dissipation. All of the seams in Statshield® smocks are designed to maintain electrical continuity from panel to panel and from sleeve to sleeve in accordance with the ESD Association Garment Standard, ESD-STM2.1.

Standard Colors Available:



Blue Black Grey White

*Fabric lots vary slightly in color.

Statshield® smocks are available in the following styles and sizes:

Sizes	Blue	Black	Grey	White	Chest	Sleeve
X Small	74300	74310	74320	74330	30"-32"	33 3/4"
Small	74301	74311	74321	74331	34"-36"	34"
Medium	74302	74312	74322	74332	38"-40"	34 3/8"
Large	74303	74313	74323	74333	42"-44"	35"
X Large	74304	74314	74324	74334	46"-48"	35 1/2"
2X Large	74305	74315	74325	74335	50"-52"	35 1/2"
3X Large	74306	74316	74326	74336	54"-56"	37"
4X Large	74307	74317	74327	74337	58"-60"	36 1/2"
5X Large	74308	74318	74328	74338	62"-64"	36"
6X Large	74309	74319	74329	74339	66"-68"	36"

Installation

Follow the directions below for proper installation and grounding of the Statshield® smock.



Yes

Yes

No

Figure 2. Proper Installation of Smock wearer's body

1. Put on the smock and fasten all of the snaps on the front of the smock, making sure that clothing is not exposed outside of the smock.
2. Operators may roll up sleeves, so long as all clothing remains covered. Operators wearing long sleeved shirts must leave the sleeves down. Operators must be grounded with foot grounders or wrist straps when wearing a smock and handling any ESD susceptible items.
3. Throughout use, it is essential that material be in contact with operator's skin.

Grounding Integrity Testing

Panel-to-panel conductivity is essential so as not to leave portions of the smock as isolated charged conductors. Panel-to-panel conductivity is can be tested using the Surface Resistance Meter Kit. For additional information, refer to ANSI/ESD S20.20, ESD TR20.20, ESD TR53 and the Garment Standard, ANSI/ESD STM2.1.

Heat Sealed Patches

Patches may be heat-sealed to the smocks. The patch should be small and the smock should be tested before and after application.

Maintenance

Desco recommends Woolite. Liquid detergents are better than dry because there is less caking and frictional wear. Use only non-ionic softeners and detergents when laundering. Launder Statshield® smocks in cool or warm water, tumble dry with low heat or hang dry. DO NOT USE BLEACH OR FABRIC SOFTENER.

Use a standard household machine on gentle cycle or industrial machine "Pony" (typically under 200 pound loads) machine. It is not recommended to launder these Statshield® smocks in heavy industrial laundry machines because it will lead to premature wear; degrading the ESD properties.

Statshield® smocks should be tumbled dry using low heat. The carbon-suffused mono-filament nylon is sensitive to heat and should not be exposed to laundering heat in excess of 120°F. Under normal wearing and recommended maintenance conditions, Desco Statshield® ESD protective smocks will maintain their usefulness and effectiveness for a minimum of 100 washings.

Specifications

Fabric Weight*	2.2 oz per square yard
Fabric Content	Texturized polyester and a minimum of 9% carbon
Carbon Mono-filament	Conductive at 1×10^4 ohms, nonflaking and non-sloughing.
Surface Resistance	1×10^5 to $< 1 \times 10^7$ ohms, per ANSI/ESD STM2.1 and ESD TR53 of Fabrics
Glass Transition Temperature	250°F
Flash Point	1040°F
Country of Origin	United States of America

*Fabric lots vary slightly in color and weight.

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

See [Desco Terms and Conditions](#)