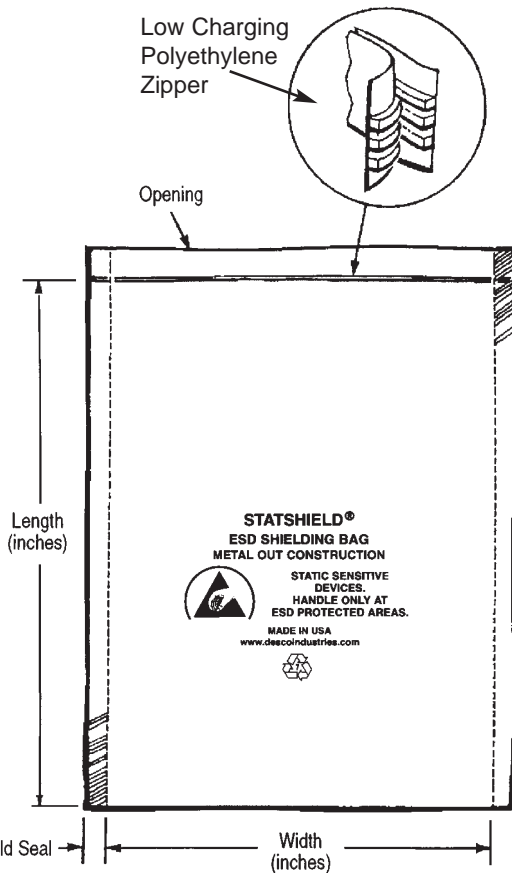


# STATSHIELD® M/O SERIES



Side Weld Seals 3/8 in.

See reverse side for available sizes.

**A fundamental ESD control principle (see ANSI/ESD S20.20 Foreword):**

ESD susceptible items should be transported and stored outside an Electrostatic protected Area enclosed in low charging, static shielding protective packaging.



Made in America

**Specifications:**

**Electrical Properties**

Surface Resistance:  
 Outer Surface <math><10^8</math> ohms  
 Aluminum Layer <math><10^2</math> ohms  
 Inner Surface <math><10^{11}</math> ohms  
 Static Shielding <math><20</math> nJ  
 Charge Generation (nC/in<sup>2</sup>) Teflon: -0.03  
 Quartz: +0.10  
 Capacitance Probe (to dissipate 1 KV) <math><30V</math>

**Typical Values**

<math><10^8</math> ohms  
 <math><10^2</math> ohms  
 <math><10^{11}</math> ohms  
 <math><20</math> nJ  
 Teflon: -0.03  
 Quartz: +0.10  
 <math><30V</math>

**Test Procedures/Method**

EOS/ESD S11.11  
 EOS/ESD S11.11  
 EOS/ESD S11.11  
 EOS/ESD S11.31  
 Modified Incline Plane  
 Modified Incline Plane  
 MIL-PRF-81705D, EIA 541

**Physical Properties:**

Bag Thickness:  
 Polyester Layer 0.5 Mils  
 Aluminum Layer 10-25 Angstroms  
 Polyethylene Layer 2.5 Mils  
 Total Thickness 3.0 to 3.1 Mils  
 Light Transmission (%) 40% (Tobias)  
 Seam Strength Pass  
 Tear Strength (lbs) >25  
 Puncture Resistance (lbs) >10  
 MVTR (gms / 100 in<sup>2</sup> / 24 hrs, 100°F) 0.40  
 Burst Strength (psi) >50 psi  
 Heat Seal >10 lbs/in.  
 Abrasion Resistance >30 cycles  
 Outgassing Pass

0.5 Mils Static Dissipative PET film ASTM D-2103  
 10-25 Angstroms  
 2.5 Mils Static Dissipative PE film ASTM D-2103  
 ASTM D-2103  
 ASTM D-1003  
 MIL-PRF-81705D  
 ASTM D-1004  
 ASTM D-2065  
 ASTM F-1249  
 FTMS 101C, 2065.1  
 375°F, 1/2 sec 60 psi  
 Sutherland Abr. (.0000 Steel Wool)  
 ASTM E595

**Chemical Properties**

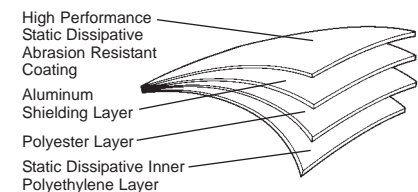
Corrosion No effect on aluminum, copper, silver, Sn-Pb coated foil, stainless steel, low carbon steel  
 Polycarbonate Capability Yes  
 No Amines N-Octanoic Acid Not present



**Mixed Unsortable Plastic Scrap**

Mixed unsortable plastic scrap shall contain assorted plastics of multiple grades that are co-extruded, bonded or laminated together which are unsortable into individual grades.

**ESD Systems.com's bags are recyclable**



The bag's material meets the performance specification requirements of Mil-PRF-81705D, Type III. Bag is free of amines, N-octanoic acid, and heavy metals.

Statshield®, Statfree®, and Faraday® are Registered Trademarks of Desco Industries Inc.

**STATSHIELD® BAG, SHIELDING, METAL OUT CONSTRUCTION, ZIPPER**



432 NORTHBORO ROAD CENTRAL  
 MARLBORO, MA 01752-3170  
 PHONE (508) 485-7390  
 FAX (508) 480-0257



Visit our online  
 library of Tech Drawings:  
<http://www.esdsystems.com>

**DRAWING NUMBER**

**TD-31090**

**DATE**

**01/06**

Item No.	Size (in.) W x L	Item No.	Size (in.) W x L
31090	3 x 5	31125	10 x 14
31095	4 x 6	31130	10 x 24
31100	5 x 8	31135	12 x 16
31105	6 x 10	31140	12 x 18
31110	8 x 10	31145	15 x 18
31115	8 x 12	31150	18 x 18
31120	10 x 12	31155	18 x 24
Packaged 100 per package			

### ESD Systems.com ESD Bags Are Generally Reusable

The user must determine the suitability of ESD bags for particular applications and after one year from purchase date.

All ESD Shielding Bags that are ripped, torn, or scratched should be discarded. The Bag's protection is lost if there is an electrical path from the charge on the outside of the Bag to the inside layer and ESDS parts within. Scratching may compromise the Faraday Cage shielding protection of shielding bags so they will not perform their function of protecting stored or transported ESD susceptible devices from electrostatic charges and discharges.

From ANSI/ESD S20.20 paragraph 6.2.4.2. Packaging Guidance: "The objective of ESD protective packaging is to prevent a direct electrostatic discharge to the ESDS item

contained within and allow for dissipation of charge from the exterior surface. In addition, the packaging should minimize charging of the ESDS item in response to an external electrostatic field and triboelectrification. They may also lose static shielding properties by crumpling, puncturing and folding."

Some end users reuse a Statshield® Transparent Metal In ESD Shielding Bag up to six times and then discard.

Ideally, the user should test, auditing some percentage of the re-used ESD Bags using test procedures outlined in ANSI EOS/ESD-DS11.11 - 1993 Surface Resistivity Standard, ESD-DS11.12 - 1996 Volume Resistance Measurements of Static Dissipative Planar Materials, and Shielding Materials EOS/ESD DS11.31 -1994.

The Organization shall define ESD protective packaging for all ESD susceptible item material movement within Protected Areas, between job sites and field service operations. See ANSI/ESD S20.20 paragraph 6.2.4.1. Packaging Requirements.

ESD susceptible items shall be packaged in ESD protective packaging while not in a Protected Area. See ANSI/ESD S20.20 paragraph 6.2.3.1.

Statshield® bags are packaged 100 per package in an oversized shielding bag rather than a cardboard box. Therefore, our bags are not exposed to water vapors that will degrade the metallized shielding layer. Our bags have an additional layer of barrier protection because of our packaging.

Ideally, ESD bags should be stored in a dry, well ventilated room with a reasonably consistent temperature of 68°F (20°C) and be protected from exposure to direct sunlight. Ideally, ESD bags should not be stored in ultraviolet sunlight, moisture, or heat.

The user shall determine the suitability of the product for their intended use. ESD Systems.com's only obligation shall be to replace such quantity of the product proved to be defective. See full Limited Warranty information at [www.desco.com/warranty.asp](http://www.desco.com/warranty.asp).

#### RoHS Compliance Statement

None of the following materials are intentionally added in manufacturing this product: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) as outlined in the Directive 2002/95/EC Article 4.1. See Desco Industries Inc. letter on-line at [ESDsystems.com](http://ESDsystems.com).