

## STATSHIELD® M/I SERIES



### Specifications:

#### Electrical Properties

|                                       |  |
|---------------------------------------|--|
| Surface Resistance:                   |  |
| Outer Surface                         | <10 <sup>10</sup> ohms                             |
| Aluminum Layer                        | <10 <sup>2</sup> ohms                              |
| Inner Surface                         | <10 <sup>10</sup> ohms                             |
| Static Shielding - Energy Penetration | <15 nJ (nanjoules)                                 |
| Charge Generation                     | Teflon: 0.09 nC/sq. in.<br>Quartz: 0.01 nC/sq. in. |
| Capacitance Probe (to dissipate 1 KV) | <30V   |

#### Typical Values

#### 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 Static Dissipative PET film | ASTM D-2103                        |
| Aluminum Layer                                   | 10-25 Angstroms                      |                                    |
| Polyethylene Layer                               | 2.5 Mils Static Dissipative PE film  | ASTM D-2103                        |
| Total Thickness                                  | 3.1 Mils                             | ASTM D-1003                        |
| Light Transmission (%)                           | >40% (Tobias)                        | FTMS 101K, Method 2065.1           |
| Burst Strength (psi)                             | >50                                  | 375°F, 1/2 sec 60 psi              |
| Heat Seal (lbs/in)                               | >10                                  | MIL-PRF-81705D                     |
| Seam Strength                                    | Pass                                 | ASTM D-1004                        |
| Tear Strength (lbs)                              | >25                                  | ASTM D-1422                        |
| Tear Resistance                                  | 100 grams/mil                        | ASTM D-2065                        |
| Puncture Resistance (lbs)                        | >12                                  | FTMS 101C/2065                     |
| MVTR (gms / 100 in <sup>2</sup> / 24 hrs, 100°F) | 0.35                                 | Sutherland Abr. (.0000 Steel Wool) |
| Abrasion Resistance                              | >100 cycles                          | ASTM E595                          |
| Outgassing                                       | Pass                                 | MIL-STD-3010, M3005                |
| Non-corrosive                                    | Pass                                 |                                    |

#### Chemical Properties

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

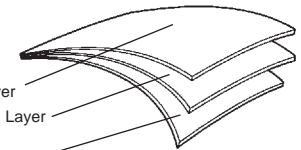


#### Mixed Unsortable Plastic Scrap

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.

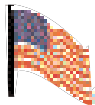
**Desco's bags are recyclable**

Static Dissipative  
Outer Polyester Layer  
Aluminum Shielding Layer  
**High Performance**  
Static Dissipative Inner  
Polyethylene Layer



*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.



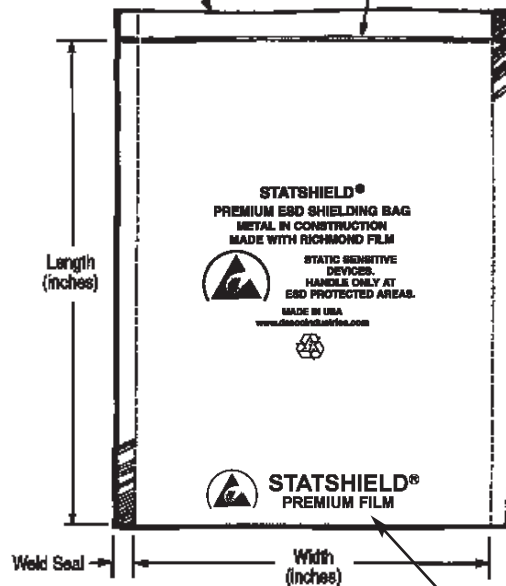
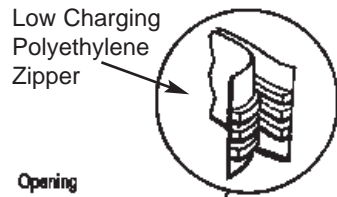
Made in America

### STATSHIELD® PREMIUM BAG, SHIELDING, METAL IN CONSTRUCTION, ZIPPER

DESCO WEST: 3651 WALNUT AVE., CHINO, CA 91710 WEB SITE: [www.desco.com](http://www.desco.com)  
PHONE (909) 627-8178 FAX (909) 627-7449  
DESCO EAST: 90 HUDSON RD, CANTON, MA 02021-1407  
PHONE (781) 821-8370 FAX (781) 575-0172

DRAWING NUMBER  
12750

DATE:  
02/06



Side Weld Seals 3/8 in.

See reverse side for available sizes.

**The Statshield® watermark ensures you are getting top quality Desco proprietary shielding film manufactured by Richmond, reliably creating a Faraday Cage to protect ESD susceptible devices for storage and transportation outside an ESD protected area.**

**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.

# DESCO

### PREMIUM METAL IN BAG SIZES, WITH ZIPPER

| Item # | Size (WxL) | Item # | Size (WxL) | Item # | Size (WxL) |
|--------|------------|--------|------------|--------|------------|
| 12750  | 3" x 5"    | 12757  | 8" x 8"    | 12764  | 12" x 16"  |
| 12751  | 4" x 4"    | 12758  | 8" x 10"   | 12765  | 12" x 18"  |
| 12752  | 4" x 6"    | 12759  | 8" x 12"   | 12766  | 14" x 18"  |
| 12753  | 4" x 24"   | 12760  | 10" x 12"  | 12767  | 15" x 18"  |
| 12754  | 5" x 8"    | 12761  | 10" x 14"  | 12768  | 18" x 18"  |
| 12755  | 6" x 10"   | 12762  | 10" x 24"  | 12769  | 18" x 24"  |
| 12756  | 6" x 24"   | 12763  | 11" x 15"  | 12770  | 24" x 24"  |

Packaged 100 per package

### Desco 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. Desco'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.htm](http://www.desco.com/warranty.htm).

### 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 [Desco.com](http://Desco.com).