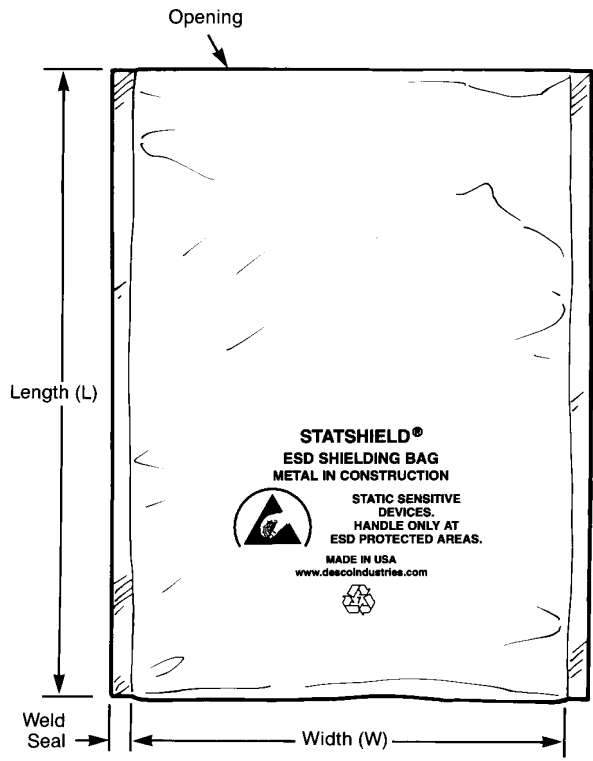


# STATSHIELD® M/I SERIES



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.



## Specifications:

### Electrical Properties

Surface Resistance:	
Outer Surface	<10 <sup>11</sup> ohms
Aluminum Layer	<10 <sup>2</sup> ohms
Inner Surface	<10 <sup>11</sup> ohms
Static Shielding	<25 nJ
Charge Generation	Teflon: 0.09 nC/sq. in. Quartz: 0.01 nC/sq. in.
Capacitance Probe (to dissipate 1 KV)	<30V

### 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	2.8 to 3.0 Mils	ASTM D-2103
Light Transmission (%)	>40% (Tobias)	ASTM D-1003
Burst Strength (psi)	>50	FTMS 101K, Method 2065.1
Heat Seal (lbs/in)	>10	375°F, 1/2 sec 60 psi
Seam Strength	Pass	MIL-PRF-81705D
Tear Strength (lbs)	>25	ASTM D-1004
Puncture Resistance (lbs)	>10	ASTM D-2065
MVTR (gms / 100 in <sup>2</sup> / 24 hrs, 100°F)	<0.40	FTMS 101C/2065
Abrasion Resistance	>100 cycles	Sutherland Abr. (.0000 Steel Wool)
Outgassing	Pass	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 or N-Octanoic Acid	Not present

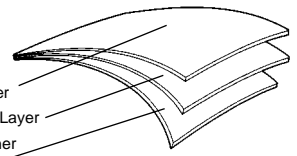


### Mixed Unsortable Plastic Scrap

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  
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.

## STATSHIELD® BAG, SHIELDING, METAL IN CONSTRUCTION



DESCO WEST: 3651 WALNUT AVE., CHINO, CA 91710 WEB SITE: 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**  
13405

**DATE:**  
01/03

### METAL IN BAG SIZES

Item #	Size (WxL)	Item #	Size (WxL)	Item #	Size (WxL)	Item #	Size (WxL)
13405	3" x 5"	13446	6" x 16"	13475	10" x 14"	13510	14" x 18"
13415	4" x 6"	13447	6" x 18"	13476	10" x 16"	13515	15" x 18"
13416	4" x 8"	13450	6" x 30"	13485	10" x 24"	13520	18" x 18"
13420	4" x 24"	13457	7" x 15"	13488	10" x 26"	13524	18" x 24"
13425	4" x 30"	13460	8" x 10"	13490	10" x 30"	13528	20" x 24"
13430	5" x 8"	13465	8" x 12"	13495	11" x 15"	13530	24" x 24"
13440	6" x 8"	13466	8" x 16"	13500	12" x 16"	13531	24" x 30"
13443	6" x 12"	13468	8" x 24"	13505	12" x 18"		
13445	6" x 10"	13470	10" x 12"	13506	12" x 24"		
Packaged 100 per package							

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).

### 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.