

# STATSHIELD® EMI/RFI MOISTURE BARRIER BAG SHIELDING SERIES



Made in America



## Specifications:

### Electrical Properties

Surface Resistivity  
(both surfaces @ 12%RH,  $\Omega$ /sq)  
Resistivity, conductive metal layer ( $\Omega$ /sq)  
EMI Shielding  
(dB between 1 and 10 GHz)  
Capacitive Probe Test  
(high voltage discharge, V)  
Charge Generation  
Teflon (nC/in<sup>2</sup>)  
Quartz (nC/in<sup>2</sup>)

### Typical Values

<10E11  
<10E2  
<40  
<20  
-0.09  
+1.0

### Test Procedures/Method

ANSI/ESD S11.11  
ASTM D257  
ANSI/ESD S11.31  
EIA Std 541/Appendix E, 1kV Discharge  
Modified incline plane  
Modified incline plane

### Physical Properties

Thickness (mils)  
Tensile Strength (MD, psi)  
Tensile Strength (TD, psi)  
Tear Strength (MD, lb)  
Tear Strength (TD, lb)  
Elongation (MD, %)  
Elongation (TD, %)  
Burst Strength (psi)  
Puncture Strength (lb)  
Heat Seal Strength  
(Vetrod bar sealer, lb/in width)  
Heat Seal Temperature (°F)  
Light Transmission (%)  
WVTR (gms / 100 in<sup>2</sup> / 24 hrs, 100°F)  
O<sub>2</sub>TR

3.5 (92 microns)  
9,000  
10,500  
4.7  
4.3  
98  
80  
>84  
>20  
>11  
325 (60 PSI @ 3 sec dwell)  
<0.01  
<=0.02  
<0.002  
Pass  
No evidence of corrosion,  
pitting, or etching of material  
Pass

ASTM D2103  
ASTM D882-91 Method A  
ASTM D882-91 Method A  
ASTM D1004-94, notched  
ASTM D1004-94, notched  
ASTM D882-91 Method A  
ASTM D882-91 Method A  
FTMS 101-C, Method 2007-1a  
FTMS 101-C, Method 2065.1  
ASTM D1876-93  
ASTM D1033-92  
ASTM F1249-90  
ASTM D3985 @ 100% Oxygen,  
100 in<sup>2</sup>/24 hr, 77°F, 0%: 90% R.H.  
ASTM E595  
FTMS 101C, Method 3005  
MIL-STD-3010, M3005

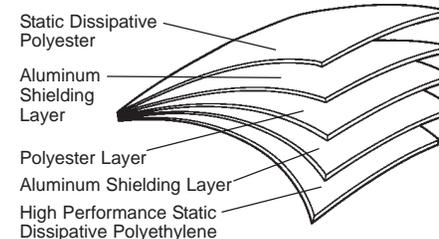
Outgassing  
Contact Corrosion

Non-corrosive

### Chemical Properties

Polycarbonate compatible: Contains no Amines, Amides, or N-Octanoic Acid.

**Shelf life of bags is minimum one year in normal indoor storage conditions.** Because we package all of our Statshield® bags in an oversized shielding bag rather than a cardboard box, our bags are not exposed to moisture that will degrade the metallized shielding layer. Our bags have an additional layer of barrier protection because of our packaging.



**NOTE:** The complete dry package concept of packaging for electronics requires three elements:

- Moisture Barrier Bag - To Protect
- DESICCANT - To Absorb Moisture
- INDICATOR - To Monitor Performance

For detailed instructions ask for Technical Bulletin TB-2031 "Application Instructions for Moisture Barrier Bags."

### DESICCANT PACK INFORMATION

Desiccant packs meet MIL-D-3464. Packs meet Type I and Type II criteria for dust-free packaging. RULE-OF-THUMB - use 1/2 unit for every 45 square inches of bag area.  
13850 1/2 unit Pail of 550  
13852 1 unit Pail of 300

### HUMIDITY MONITOR INFORMATION

13870 Humidity Monitor. Can of 100 2" x 3" blotting paper cards that indicate 10, 20, 30 and 40% relative humidity with a color comparison bar. Meets MIL-I-8835.

Film complies with the electrical and physical requirements of EIA-541, EIA-583, EIA-625, and Mil-PRF-81705D Type I

This material is used in commercial applications only  
Statshield®, Statfree®, and Faraday® are Registered Trademarks of Desco Industries Inc.

See reverse side for available sizes.

## STATSHIELD® EMI/RFI, SHIELDING, MOISTURE BARRIER BAG, 3.5 mil

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DRAWING NUMBER  
13806

DATE:  
6/07



## EMI/RFI STATIC SHIELDING BAG SIZES

Item #	Size (WxL)	Item #	Size (WxL)	Item #	Size (WxL)
13805	4" x 24"	13820	10" x 24"	13829	16" x 18"
13808	6" x 10"	13822	10" x 30"	13830	18" x 18"
13810	6" x 24"	13824	12" x 16"	13832	18" x 24"
13811	6" x 30"	13826	12" x 18"		
13816	10" x 12"	13828	15" x 18"		

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 section 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 section 6.2.3.1.

“...it is important to take possible temperature exposure into account when shipping electronic parts. It is particularly important to consider what happens to the interior of a package if the environment has high humidity. If the temperature varies across the dew point of the established interior environment of the package, condensation may occur. The interior of a package should either contain desiccant or the air should be evacuated from the package during the sealing process. The package itself should have a low WVTR.” (ESD Handbook TR20.20 section 5.4.3.2.2)

### Desco ESD Bags Are Generally Reusable

For best results, bag inventory should be continually replenished. It is recommended that standard packs of bags should be stored in its original packaging in a climate controlled environment where the temperature ranges from 45 degrees F to 70 degrees F and relative humidity is 50%. Bags should not be stored in ultraviolet sunlight, moisture, or heat because the aluminum shielding layer could oxidize if exposed to these conditions.

We have no reports of degradation of ESD control properties of bags sealed in original standard pack packaging. Desco's Limited Warranty expressly warrants that for a period of one (1) year from the date of purchase, Desco products will be free of defects in material (parts) and workmanship (labor).

Before using and after one year from purchase date, users shall determine the suitability of the Statshield ESD Bags for their intended use. Users assume all risk and liability whatsoever in connection therewith. Mishandling or improper storage may render an ESD Bag unusable to perform its function. ESD Bags that are ripped, torn, or scratched should be discarded.

From ANSI/ESD S20.20 section 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/ESD-S11.11 Surface Resistivity Standard, ANSI/ESD-S11.12 Volume Resistance Measurements of Static Dissipative Planar Materials, and Shielding Materials ANIS/ESD S11.31.

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.aspx](http://www.desco.com/Warranty.aspx).

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.

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