

RIBS ULTRA MVTR

Reactive Intercept™ Barrier System



Description:

RIBS Ultra MVTR is a combination of two inventions that provides a reusable package with permanent electrostatic protection (ESD and EMI Shielding), full MVTR protection, and a self contained de-ionizer for corrosive gases. This heavily metallized laminated co-extruded film contains a single layer of two distinctly different properties. One side of the extruded film is a matrix of polymer and conductive carbon. The inside layer of the film is a static dissipative, non-sloughing, polymer with a backbone of reactive Copper that provides a membrane over the carbon layer. The resulting film provides 4 functions:

- (1) A pathway for electrical charges to flow through the membrane to the conductive layer.
- (2) A pathway for free organic ions to flow through the membrane to be absorbed by the carbon.
- (3) A pathway for free inorganic ions to react with and be neutralized by the Copper in the membrane
- (4) A metallized polyester to provide EMI and ESD shielding and moisture barrier protection.

Physical Properties

Physical Properties	Test Method	Specification
Color		Silver / Copper
Thickness	PST #001	5.0 mil (0.127 mm)
Yield	PST# 002	7500 Sq in./Lb
Tensile Strength	ASTM D-882	25 Lb/in.
Puncture Resistance	FTMS 101C Method 2065	> 29 Lbs.
Tear Initiation	ASTM D-1004	< 2.5 Lbs
Mullen Burst	ASTM D-774	100 Lbs
Seam Strength	ASTM D-882	> 14Lbs (no separation)
Seam Fabrication		No leakage at seams
Optical Density		Photo Opaque
Heat Seal		375°F .05 sec 60 PSI
Blocking		No Blocking, delamination or rupture
Resistance to Curl		No curl in excess of 5% or curl back
Water Resistance		No delamination
Oil Resistance		No leaking, swelling, delamination

Electrical Properties

Electrical Properties	Test Method	Specification
Surface Resistivity	ASTM D-1003 15% RH	PE < 10 ¹⁰ Ω / Sq PET < 10 ¹¹ Ω / Sq
Energy Test	S11.31	< 5 nJ
Charge Retention	20,000 volts applied	< 5 volts measured
WVTR	ASTM –1249 90F 100 Sq in/24 Hrs	< .0005 gr /100 in2 / 24 hrs
EMI Shielding	(mil 81705 Rev C)	> 45 dB between 1– 10 GHz
Static Decay	FTS 101C, Method 4046.1	> 0.02 sec
Storage Stability	No change in electrical properties	Pass – Time/Temp independent

Chemical Properties

Chemical Properties	Test Method	Specification
Contact Corrosivity	FTMS 101C Method 3005	Pass, No Corrosion, etching, pitting
Total Organic outgassing	Dynamic Headspace	< 220 ug/g
Total Inorganic outgassing	Dynamic Headspace	non detectable
NVR (Total Residue)	< .5 ug/cm ²	Std Method 2540C

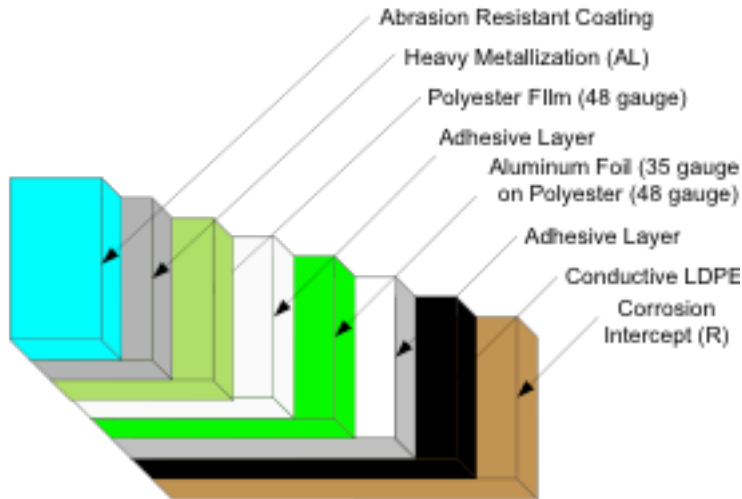
Material Cleanliness

Material Cleanliness	Values	Test Method
Ammonium	< 30 ng/cm ²	Ion Test
Bromide	< 30 ng/cm ²	ASTM D 5542-94
Calcium	< 30 ng/cm ²	
Chloride	< 30 ng/cm ²	
Fluoride	< 30 ng/cm ²	
Lithium	< 30 ng/cm ²	
Magnesium	< 30 ng/cm ²	
Nitrate	< 30 ng/cm ²	
Nitrite	< 30 ng/cm ²	
Phosphate	< 30 ng/cm ²	
Potassium	< 30 ng/cm ²	
Sodium	< 30 ng/cm ²	

Sulfate < 30 ng/cm²

Note: Can be made to be clean level 100

RIBS MVTR ULTRA



Note:

RIBS ULTRA:

- Conforms to Mil B-81705-C except for print
- Permanent ESD shielding
- ESD properties are permanent
- ESD Properties are humidity and time independent
- Metal out design ensures low charge retention
- Ideal for clean class 1000 or clean class 100

- Double metal layer to ensure no pinholes
- Metal out design to ensure ultra low charge retention
- Metal out design coupled with Intercept inner layer ensures permanent ESD protection
- Humidity independent ESD protection
- Non degrading shielding due to triple conductive layers
- Patented design



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* Disclaimer – the values shown above is from representative test data on standard product and does not constitute a specification