

RIBS MVTR™ - 6 Mil Heavy Duty Reactive Intercept™ Barrier System



RIBS MVTR 6 mil 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	Test Method	Specification
Color		Silver / Copper
Thickness	PST #001	6.0 mil
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
Optical Density		Photo Opaque
Heat Seal		375°F .05 sec 60 PSI
Blocking	None	None

Electrical Properties	Test Method	Specification
Surface Resistivity	ASTM D-1003 15% RH	PE < 10 ¹¹ Ω / Sq PET < 10 ⁶ Ω / Sq
Energy Test	S11.31	< 5 nJ
Charge Retention	20,000 volts applied	< 5 volts measured
MVTR	24 hrs at 40 °C after flex testing per condition "E" ASTM F 392. WVTR is measured using ASTM F 1249	
EMI Shielding	(mil 81705 Rev C)	> 0.01 gms/ 100 in2 > 45 dB between

Chemical Properties	Test Method	Specification
Contact Corrosion	FTMS 101C Method 3005	Pass – No Corrosion
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	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/cm ²	

Note: Can be made to be clean level 100