



## HIGH PERFORMANCE VpCI® PACKAGING

# VpCI®-125

## Shrink Static Dissipative Film and Bags



### PRODUCT DESCRIPTION

VpCI-125 Shrink Static Dissipative Film and Bags are unique in their ability to prevent corrosion and ESD damage. This film combines the latest plastic technology with the most effective corrosion protection for different metals and with the strong static dissipative properties. Cortec VpCI films and bags replace conventional rust preventatives such as oils and desiccants. You save even more because Cortec VpCI packaging eliminates all the degreasing or coating removal required in the past. Your product can now be used immediately.

VpCI-125 bags effectively protect components from electrostatic discharge. VpCI-125 conforms to MIL-PRF-81705D (Static Dissipative Packaging Materials). The static dissipative properties of VpCI-125 are humidity independent; its unique composition does not require the presence of moisture to function. VpCI-125 doesn't contain free amines, phosphates, silicones and other harmful materials. VpCI-125 is non-toxic.

### ADVANTAGES

- Provides multimetal VpCI protection to ferrous and non-ferrous metals
- Prevents ESD damage
- Humidity independent - does not require the presence of moisture on the surface to provide protection against triboelectric charge generation
- Does not affect optical properties
- Does not affect plastics used in electronic industry
- Does not contain free amines or toxic compounds
- Contains Vapor phase Corrosion Inhibitors (VpCI) to protect void spaces and recessed areas
- Strong puncture resistant film

### VARIETY OF SIZES

VpCI-125 bags are available in custom-size bags in both heat-sealable and zipper closure form, film and tubing.

VpCI-125 bags are constructed of static dissipative polyethylene containing Vapor phase Corrosion Inhibitors in thicknesses from 2-6-mils (50-150 microns), with a maximum tube size of 50" (1.3 m).

### PERFORMANCE

ESD Properties conform to MIL PF-81705 D (Type I, Class 1)

- Surface Resistivity (ASTM B 257) between  $1 \times 10^5$  and  $10^{12}$   $\Omega$ /sq.
- Static Decay Rate (Method 4046, MIL STD-3010A) - Less than 2 seconds

### APPLICATIONS

VpCI-125 Shrink Static Dissipative Bags and Film are recommended for packaging of static-sensitive and non-static sensitive components where triboelectric charge generation and corrosion are concerns. They are recommended for packaging of integrated circuits, printed circuit boards, PCB components, telecommunications equipment, electronic and electrical panels and enclosures.



**PACKAGING AND STORAGE**

VpCI-125 should be stored indoors at ambient temperatures, sealed in their original packaging. The shelf life is up to one year in original packaging. Film should be sealed to minimize air exchange.

**METALS PROTECTED**

VpCI-125 forms a monomolecular layer on metal substrates, which does not interfere with the physical or chemical properties of electronic components. Metals VpCI-125 protects include:

- Steel
- Copper, alloys
- Aluminum, alloys
- Brass
- Solder
- Silver
- Nickel
- Various plated substrates

For metals not specifically listed above, contact Cortec for information regarding their protection.

**Shrink Test (ASTM D-2732)**

VpCI-125 Shrink Film (6mil B.U.R. = 2.5:1)	Machine Direction Shrink (%)	Cross Direction Shrink (%)
Sample #1	58	27
Sample #2	60	33
Sample #3	58	34
Sample #4	60	26

Note: Shrink amount will depend on B.U.R.

**MECHANICAL PROPERTIES**

Test Method	VpCI-125 (4 mil)	Non-corrosion inhibiting, Low Density Polyethylene Film (4 mil)
Tensile Strength at Break, ASTM- D-882 (lbf)	19.25/19.00	10.20/10.06
% Elongation at Break, ASTM D-882A	594.4/416.0	378.70/350.3
Tensile Strength at Peak, ASTM D-882 (psi)	3453.20/275.82	2665.206/2704.52
Tear Test, ASTM D 1922 (Gf)	1162.67/2549.33	437.33/608.00
Puncture Resistance, ASTM D 3420 (j)	1.41	1.26

Machine Direction/Cross Direction

**ESD Properties**

Test	MIL-PRF-81705D Requirements	VpCI-125 (4 mil)
Surface Resisitivity (outside surface)	<10 <sup>12</sup> ohms/sq	1.46 x 10 <sup>11</sup> ohms/sq
Surface Resisitivity (inside surface)	<10 <sup>12</sup> ohms/sq	1.14 x 10 <sup>11</sup> ohms/sq
Static Decay (+5000 Volts, outside surface, 1% cutoff)	<2 sec	0.34 sec
Static Decay (+5000 Volts, outside surface, 1% cutoff)	<2 sec	0.42 sec
Static Decay (+5000 Volts, inside surface, 1% cutoff)	<2 sec	0.34 sec
Static Decay (+5000 Volts, inside surface, 1% cutoff)	<2 sec	0.36 sec

**FOR INDUSTRIAL USE ONLY**

**KEEP OUT OF REACH OF CHILDREN**

**KEEP CONTAINER TIGHTLY CLOSED**

**NOT FOR INTERNAL CONSUMPTION**

**CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION**

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