

TD.637 – TECHNICAL DATA: E100-CESD™ Conductive Epoxy Primer

Revised: 5/16/2024 Version: 1.0

Product Description:

E100-CESD™ is a very high solids, pigmented conductive primer that provides static dissipative properties ($1.0 \times 10^4 - 1.0 \times 10^5 \Omega/\text{square (ohms)}$). E100-CESD™ conductive primer is intended to be used with E100-CESD™ conductive topcoat. It provides an average of 5 V body voltage generation (tested wearing dissipative footwear). Relative indoor humidity is not a factor of ohm dissipative performance. Readings are consistent for the life of the floor. Unlike water-based ESD floors, which require increased maintenance, this floor coating was designed for heavy wear and chemical resistance requiring less maintenance.

Typical Uses:

- Electronics assembly
- Laboratories/clean rooms
- Packaging lines
- Pharmaceutical facilities
- Surgical and radiology facilities
- Warehouses and manufacturing

Key Features:

- Low maintenance
- Dissipates 5000 V charge in 0.01 seconds
- 90% solids mixed 2:1 (0% VOC)
- Excellent wear and stain resistance
- 5 V Avg. BVG with dissipative footwear
- If required, copper grounding strips may be used
- USDA and CFIA compliant

Physical Properties

Mix Ratio		2 to 1 by volume
Gel Time	ASTM C881	20-30 minutes
Colors		dark gray
Recoated with Conductive Topcoat		8 hours
Consistency		Flowable
Compressive strength	ASTM D695	8,200 psi
Tensile strength	ASTM D638	3,000 psi
Flexural strength	ASTM D790	3,100 psi
Concrete bond strength	ASTM D4541	400 psi substrate fails
Water absorption (2-hour Boil)	ASTM D570	0.05%
Surface resistivity (meets ANSI/ESD S20.20)	ASTM D257	1.0×10^4 to 1.0×10^5 ohms
Static decay	Mil-STD 3010, Method 4046	0.01 seconds
Static generation	ANSI/ESDSTM 97.2	<25 V
With dissipative footwear	ANSI/ESDSTM 97.2	5 V
Slip resistance	ASTM F609	0.5 minimum
Coefficient of friction	ASTM D2047	0.5
Indentation	Mil D3134	0.27 max
Impact resistance	Mil D3134	Pass
Flame Spread/NFPA 101	ASTM E84	Class A
Hardness Shore D	ASTM D2240	75-80
VOC		0% VOC

Coverage:

- Minimum 2 coats at 160 ft²/gal each
- Thicker applications result in improved ESD readings
- Thoroughly mix Part A prior to adding Part B

Limitations:

- Colors do not match the E100 Series color chart due to the conductive additive that darkens the color.
- Recommended application temperatures are 68°F to 88°F / 20° C to 31° C, to ensure proper flow and leveling.
- Top coating with any other top coat or wax will render the static dissipative properties ineffective.

Available Packaging: 3 gal & 15 gal kits