



TECHNICAL DATA SHEET

ElectroCoat™ Vapor Shield is based on the Reno ElectroBond system of bonding refractories which relies on the generation of electric charges that control the bond formation in the material. The main features are:

- 1. Low porosity due to reduced inter-particle spacing of nano particles.
2. Very small pore sizes in the matrix prevent penetration of liquid zinc vapors into the structure.
3. Designed to control the penetration of zinc into the lining.
4. Designed to be used in conjunction with an engineered thermal system.
5. Product can be used as a safety lining barrier over coils.

ElectroCoat™ Vapor Shield ceramic coating is designed for refractory linings exposed to iron and steel melting processes using galvanized scrap. The zinc vapors released during melting diffuse through the refractory and condense near the shell due to the high permeability of most refractories. The zinc is then free to migrate to the lowest position in the vessel due to gravity. Severe problems arise from shorting electrical devices to ground. The Zinc Shield vapor barrier can prevent the vapors from condensing near electric coils and inductors.

Table with 3 columns: Property, Value 1, Value 2. Rows include SERVICE TEMPERATURE (3000°F, 1650°C), MATERIAL DENSITY (159 lbs./ft³, 2.72 g/cm³), ELECTROLYTE REQUIRED (14.8%), ELECTROLYTE TYPE (E11), and COVERAGE (1.66 lbs/ft² @ 1/8" thickness).

TYPICAL CHEMICAL ANALYSIS (Weight Percent after calcining)

Table with 7 columns: Al2O3, SiO2, P2O5, Fe2O3, CaO, Alkalies, Other. Values: 96.00, 2.29, 0.18, 0.06, 0.42, 0.25, 0.45.

TYPICAL PHYSICAL PROPERTIES

Table with 7 columns: Prefire Temperature (°F, °C), Average Pore Diameter (micron), Surface Area (m²/g), Bulk Density (g/cm³), Absolute Density (g/cm³), Permeability (mDarcys), Threshold Pressure (psi). Rows for 250/115, 750/400, and 1500/815.

Thermal Expansion Coefficient: 3.85E-6 in/in/°F

PACKAGING: 40/55# bags with 40-1gal jugs of Electrolyte E11
EBCO 19-021 D

192570 – 6/12/19

The data presented represents typical average results obtained by testing under ASTM or other acceptable procedures as required. They are subject to normal variations and should not be used for specification purposes.