



TECHNICAL DATA SHEET

Electro ShellCoat is based on the Reno Electro system of bonding refractories, which relies on the generation of electric charges that promote bond formation within 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 alkali vapors onto the shell.
3. Designed to control the flow of heat through the shell.
4. Designed to be used in conjunction with an engineered thermal system.
5. Product also can resist the contact of iron onto the shell. The potential of a molten iron breakout is reduced.

Electro ShellCoat ceramic coating is designed for coating the interior metal shell of refractory structures. The coating provides a vapor barrier and insulation to the refractory lining. Alkali vapors released from the process diffuse through the refractory and condense near the shell due to the high permeability of most refractories. Corrosion rate is then increased and the shell/anchors often fail. The low thermal conductivity reduces the shell temperature and heat loss is significantly reduced.

SERVICE TEMPERATURE:	2800°F	1538°C
MATERIAL DENSITY:	92.7 lbs./ft ³	1.49 g/cm ³
ELECTROLYTE REQUIRED:	30.6%	
ELECTROLYTE TYPE:	E11	
COVERAGE:	1.94 lbs/ft ² @ 1/4" thickness	

TYPICAL CHEMICAL ANALYSIS (Weight Percent after calcining)

Al ₂ O ₃	SiO ₂	P ₂ O ₅	Fe ₂ O ₃	CaO	Alkalies	Other
0.6	97.9	0.1	0.1	0.1	0.25	0.95

TYPICAL PHYSICAL PROPERTIES

Prefire Temperature (°F)	Prefire Temperature (C)	Average Pore Diameter (micron)	Surface Area (m ² /g)	Bulk Density (g/cm ³)	Absolute Density (g/cm ³)	Permeability (mDarcys)	Cold Crushing Strength (psi)	Threshold Pressure (psi)
250	115	0.265	8.14	1.48	2.21	0.174	1195	308.0
1500	815	0.191	10.28	1.49	2.21	0.128	3635	432.4

Thermal Expansion Coefficient: 3.4E-7 in/in/°F

Effective Thermal Conductivity: 1.30 at 750°F

PACKAGING: Sold in Kits (20 lbs. each), 24 per Pallet (480 lbs.)

EBCO 19-009 Q

192580– 12/10/19

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.