



TECHNICAL DATA SHEET

ElectroCast 1116 SiC is a high alumina silicon-carbide, no-cement castable designed to be installed by vibration casting into forms.

- Based on Reno's propriety Electro Chemical bond system featuring E11, a nano-fluid electrolyte for ultimate performance.
- Rapid dry out capability while still retaining very low porosity.
- Excellent material for applications in foundries and steel mills for molten iron contact with slag.
- Excellent resistance to iron, slag, thermal shock and oxidation.
- Recommended for use in blast furnace troughs and skimmer blocks, tilting runners, cupola skimmer blocks, cupola wells, troughs, and tap-hole blocks.
- Excellent refractory for large blast furnace troughs where slag resistance at high temperatures is paramount.

Service Temperature: 3000°F
 Electrolyte Type: E11
 Addition Quantity: 3.6-4.0% (wt.)
 Wt. Required for Estimating: 196 lb/ft³
 Storage Life: 6 months

TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

Al ₂ O ₃	SiO ₂	TiO ₂	SiC + C
76.1	6.5	1.4	16

TYPICAL PHYSICAL PROPERTIES (Cast Samples)

Prefire Temperature (°F)	Modulus of Rupture (psi)	Cold Crushing Strength (psi)	Density (pcf)	Porosity (%)	Linear Change (%)	Permeability (mDarcys)	Thermal k (Btu/ft ² /in/hr)	Surface Area (m ² /g)
250	984	4,416	195.2	9.4	-0.007	0.57	20.1	5.20
750	871	3,638	194.4	11.8	NIL	1.37	20.3	6.20
1000	940	4,610	197.9	11.6	NIL	0.55	20.5	5.40
1500	2,362	12,903	197.9	11.4	0.11	1.51	20.8	5.04
2000	5,897	14,086	195.9	10.1	-0.33	2.14	21.2	3.23
2500	3,937	14,217	196.2	9.5	-0.48	1.60	21.8	1.25
2800	2,122	13,852	198.0	9.5	0.00	1.90	22.4	3.40

Thermal Expansion Coefficient: 2.97E-6 in/in/°F (ASTM C832)
 Thermal Shock Loss (after 2000°F): 21% MOR Loss (ASTM C-1171)

Abrasion Loss After 1500°F: 2.2 cc (ASTM C704)
 Abrasion Loss After 2500°F: 2.7 cc (ASTM C704)

Hot MOR at 2500°F: 1794 psi (ASTM C583-Orton)
 Hot MOR at 2750°F: 501 psi (ASTM C583-Orton)

PACKAGING: 55 lb. Bags, 72 per Pallet (3960 lbs.) 1500 lb. Bags, 2 per Pallet (3000 lbs.) 2000 lb. Bags, 2 per Pallet (4000 lbs.)
 EBCO 19-019 D Revised BP 5/16/2021 pin#194520

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.