

## ElectroPump<sup>™</sup> 310 SIC

## **TECHNICAL DATA SHEET**

**ElectroPump 310 SIC** is a high alumina, fused alumina castable with silicon-carbide additives. This product is is the pump version of the ElectroCast 310 SiC, designed for pump/casting into forms.

- Based on Reno's proprietary Electro Chemical bond system featuring an electrolyte for maximum performance.
- A premium product with excellent resistance to molten iron and slag, thermal shock and oxidation.
- Recommended for use in blast furnace troughs, skimmer-blocks, cupola wells, cupola skimmer blocks, troughs, and tap-hole blocks.
- Excellent refractory for holding and pressure-pour furnaces, receiver and discharge spouts, and ductile treatment ladles.
- The lining forms a non-wetting surface that prevents slag buildup.

Service Temperature:	3000°F
Electrolyte Type:	E3
Addition Quantity:	3.90– 4.35 % by weight
Wt. Required for Estimating:	193 lb/ft <sup>3</sup>
Storage Life:	6 months

## TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

$AI_2O_3$	SiO <sub>2</sub>	TiO <sub>2</sub>	SiC + C
80	8	1.7	10

## **TYPICAL PHYSICAL PROPERTIES**

Prefire	Modulus of	Cold Crushing	Density	Porosity	Linear	Permeability	Thermal k	Surface
Temperature	Rupture	Strength	(pcf)	(%)	Change	(mDarcys)	(Btu/ft <sup>2</sup> /in/hr)	Area
(°F)	(psi)	(psi)			(%)			(m²/g)
250	1,655	7,780	196.7	9.7	0.0	3.42	21.8	2.02
750	1,923	11,008	195.1	11.5	0.19	1.61	21.5	3.44
1500	3,952	24,097	193.1	12.1	0.20	1.19	21.1	0.93
2000	6,949	14,459	195.1	7.9	-0.19	3.80	21.0	0.62
2500*	5,948	17,857	195.0	10.6	0.00	8.98	20.8	0.19
2800 <sup>*</sup>	2,563	15,503	188.7	9.7	0.30	7.08	20.5	0.17

\* reducing atmosphere Thermal Expansion Coefficient: Thermal Shock Loss (after 2000F):

Hot MOR at 2500°F: Hot MOR at 2750°F:

Abrasion Loss After 1500°F: Abrasion Loss After 2500°F: Abrasion Loss After 2800°F: 3.11E-6in/in/ºF (ASTM C832) 24.4% MOR loss (ASTM C-1171)

3130 psi (ASTM C583 – Orton) 1082 psi (ASTM C583 – Orton)

4.4 cc (ASTM C704) 6.8 cc (ASTM C704) 4.5 cc (ASTM C704)

PACKAGING: 55 lb. Bags, 72 per Pallet (3960 ll	os.) 1500 lb. Bags, 2 per Pallet (3000 lbs.) 2000 lb. E	Bags, 2 per Pallet (4000 lbs.)
20-041	Revised BP 5/17/2021	pin#194030

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.

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