**RENO REFRACTORIES, INC**                                    **ElectroCast™ 310-SIC**

## TECHNICAL DATA SHEET

**ElectroCast 310-SIC** is a high alumina, Fused Alumina castable with silicon-carbide additives. This product is designed for vibration 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: | 3000ºF |
| Storage Life: | 6 months |
| Wt. Required for Estimating: | 193 lb/cu.ft. |
| Electrolyte Type: | E3 |
| Addition Quantity: | 3.75 – 4.25 % by weight |

### TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

| $Al_2O_3$ | $SiO_2$ | $TiO_2$ | SiC + C |
|---|---|---|---|
| 80 | 8 | 1.7 | 10 |

### TYPICAL PHYSICAL PROPERTIES

| Prefire Temperature (ºF) | Modulus of Rupture (psi) | Cold Crushing Strength (psi) | Density (pcf) | Porosity (%) | Linear Change (%) | Permeability (mDarcys) | Thermal k (Btu/ft²/in/hr) |
|---|---|---|---|---|---|---|---|
| 250 | 1,655 | 7,972 | 196.7 | 9.7 | 0.0 | 3.42 | 21.8 |
| 750 | 1,923 | 7,686 | 195.1 | 11.5 | 0.19 | 1.61 | 21.5 |
| 1500 | 3,952 | 12,045 | 193.1 | 12.1 | 0.20 | 1.19 | 21.1 |
| 2000 | 6,949 | 14,4459 | 195.1 | 7.9 | -0.19 | 3.80 | 21.0 |
| 2500* | 5,948 | 15,836 | 195.0 | 10.6 | 0.00 | 7.08 | 20.8 |
| 2800* | 2,563 | 15,503 | 188.7 | 9.7 | 0.30 | 8.98 | 20.5 |

\* reducing atmosphere

| | |
|---|---|
| Thermal Expansion Coefficient: | 3.11E-6in/in/ºF (ASTM C832) |
| Thermal Shock Loss (after 2000F): | 24.4% MOR loss (ASTM C-1171) |
| Hot MOR @ 2500ºF: | 3130 psi (ASTM C583 – Orton) |
| Hot MOR @ 2750ºF: | 543 psi (ASTM C583 – Orton) |
| ABRASION LOSS After 1500ºF: | 4.4 cc |
| ABRASION LOSS After 2500ºF*: | 6.8 cc |
| ABRASION LOSS After 2800ºF*: | 4.5 cc |

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