# Reno ElectroCast™ 10 CRM

## **TECHNICAL DATA SHEET**

Reno ElectroCast™ 10 CRM is a tabular alumina based no cement castable with chrome oxide addition.

- Based on Reno's proprietary Electro Chemical bond system featuring an electrolyte for maximum performance.
- Recommended for use in ductile iron contact and in high wear areas along tundish slag lines.
- Also recommended for other metal transfer shapes and other extreme applications such as carbon black furnaces.

Service Temperature: 3000°F/1649°C Wt. Required for Estimating: 195 lbs/ft³
Liquid Type: E10 Storage Life: 6 months
Addition Quantity: 3.75-4.75% Shotcrete Binder: N/A

# TYPICAL CHEMICAL ANALYSIS (% Calcined Basis)

| Al <sub>2</sub> O <sub>3</sub> | SiO <sub>2</sub> | Fe <sub>2</sub> O <sub>3</sub> | Cr <sub>2</sub> O <sub>3</sub> | MgO | Other |  |
|--------------------------------|------------------|--------------------------------|--------------------------------|-----|-------|--|
| 89                             | 0.4              | 0.7                            | 7.7                            | 1.8 | 0.4   |  |

## **TYPICAL COLD PHYSICAL PROPERTIES**

| Prefired to °F | Cold<br>Modulus of<br>Rupture<br>(psi) | Cold<br>Crushing<br>Strength<br>(psi) | Density<br>(pcf) | Porosity<br>(%) | Linear<br>Change<br>(%) | Abrasion<br>Loss<br>(cc) | Thermal<br>Shock<br>Change<br>(%) | Permeability (mDarcys) | Surface<br>Area (m²/g) |
|----------------|--|---------------------------------------|------------------|-----------------|-------------------------|--------------------------|-----------------------------------|------------------------|------------------------|
| 250            | 886                                    | 3,639                                 | 194              | 12.20           | -0.09                   |                          |                                   | 39.493                 | 2.556                  |
| 750            | 718                                    | 3,728                                 | 195              | 13.24           | -0.04                   |                          |                                   | 9.516                  | 3.216                  |
| 1500           | 2,525                                  | 11,020                                | 195              | 13.45           | 0.02                    | 3.24                     |                                   | 8.453                  | 2.177                  |
| 2000           | 6,848                                  | 28,738                                | 196              | 12.91           | -0.20                   |                          | 38%                               | 14.366                 | 0.627                  |
| 2500           | 8,314                                  | 18,122                                | 197              | 11.44           | -0.42                   | 3.15                     |                                   | 19.129                 | 0.232                  |
| 2800           | 7,526                                  | 14,451                                | 195              | 11.63           | -0.25                   |                          |                                   | 30.933                 | 0.149                  |

#### TYPICAL HOT PHYSICAL PROPERTIES

| Prefired to °F | Hot Modulus of Rupture (psi) | Thermal Expansion (%) | Thermal Conductivity<br>(BTU/ft²/hr/in/°F) |
|----------------|------------------------------|-----------------------|--|
| 250            |                              | 0.06                  | 17.5                                       |
| 750            |                              | 0.28                  | 16.1                                       |
| 1500           | 1,583                        | 0.64                  | 15.4                                       |
| 2000           |                              | 0.84                  | 14.9                                       |
| 2500           | 1,493                        | 0.75                  | 14.6                                       |
| 2750           | 850                          | 0.94                  | 14.5                                       |
| 3000           |                              |                       | 14.4                                       |

Coefficient of thermal expansion: 3.22E-6 in/in/°F

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