RENO REFRACTORIES, INC

ElectroCast™ 3SB

TECHNICAL DATA SHEET

ElectroCast™ 3SB is a fused alumina, low moisture castable designed to be precast, fired, and shipped ready for installation.

- A special purpose composition for use as load supporting skid rails in reheat furnaces.
- Can be field cast for hearths.
- Properties are optimized for the normal use temperature range of 2300-2500ºF.
- Based on Reno's proprietary Electro-Chemical bond system featuring a nano-fluid electrolyte for ultimate performance.
- Low Permeability plus low porosity to restrict reactivity with scale.
- Micro porosity of bond phase has greatly reduced reactivity to semi-liquid iron oxide.
- Can maintain properties in the reducing condition of a hearth.
- High hot strength and Hot Abrasion Resistance.

Service Temperature:	3000ºF
Electrolyte Type:	E3
Addition Quantity(Wt.):	3.5-3.8%
Wt. Required for Estimating:	191 lb/ft^3
Storage Life:	6 months

TYPICAL CHEMICAL ANALYSIS (% Calcined Basis)

Al_2O_3	SiO_2	Fe_2O_3	TiO_2	Other
91	6	0.65	2	0.35

TYPICAL PHYSICAL PROPERTIES (Cast Samples)

Prefire Temperature (ºF)	Modulus of Rupture (psi)	Cold Crushing Strength (psi)	Density (pcf)	Porosity (%)	Linear Change (%)From Green	Permeability (mdarcy)	Thermal k Btu/in/ft2/hr
250	1,623	5562	190.0	7.1	0.11	1.37	20.9
750	1645	6781	189.9	13.1	0.11	1.43	20.9
1500	5,132	18,208	190.7	14.0	0.02	3.08	20.9
2000	8,263	36,064	193.1	11.6	-0.02	6.12	21.0
2500	5,614	34,489	194.6	10.2	-0.44	9.87	21.1
2800	7,031	34,166	192.9	10.7	-0.25	12.33	21.2

Thermal Expansion Coefficient:	3.76E-6 in/in/ºF (ASTM C832)
Thermal Shock Loss (after 2000ºF):	20.1% MOR Loss (ASTM C-1171)
Hot MOR at 2750ºF:	1280 psi (ASTM C583)
Abrasion Loss After 2500ºF:	1.2 cc (ASTM C704)
Abrasion Loss After 2800ºF:	1.1 cc (ASTM C704)

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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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