RENO REFRACTORIES, INC

Reno FireCast SiC BF

TECHNICAL DATA SHEET

Reno FireCast SiC BF is a high alumina silicon-carbide, no-cement castable designed to be installed by vibration casting, pump cast, and shotcrete techniques.

- Based on Reno's new propriety FireCast bond system with a very easy to use character.
- Water based, easy mixing, easy dry out, consistent wear patterns.
- Rapid dry out capability while still retaining reduced porosity and high strengths.
- Excellent material for applications in steel mill Blast Furnace troughs where difficult installation conditions exist.
- 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 (1648°C)	Wt. Required for Estimating:	174 lbs/ft^3
Liquid Type:	Water	Storage Life:	6 months
Addition Quantity:	5.5 - 6.0%	Shotcrete Binder:	1.5% Mag Sulfate

TYPICAL CHEMICAL ANALYSIS (% Calcined Basis)

Al_2O_3	SiC	SiO_2	Fe_2O_3	TiO_2	CaO	MgO	Alkalies
68-72	14-17	8-10	<2	<2.5	<1	1-2	< 1

TYPICAL COLD PHYSICAL PROPERTIES

Prefired to °F	Cold Modulus of Rupture (psi)	Cold Crushing Strength (psi)	Density (pcf)	Porosity (%)	Linear Change (%)	Abrasion Loss (cc)	Thermal Shock Change (%)	Permeability (mDarcys)	Surface Area (m^2/g)
250	974	3,091	179	16.7	-0.0	-	-	13.39	4.85
750	991	3,402	180	16.5	0.0	-	-	6.47	5.46
1500	1,269	5,079	179	16.3	0.2	19 cc	-	1.64	1.18
2000	2,790	13,929	179	16.1	-0.1	-	2.75	5.01	0.17
2500	2,251	11,902	175	16.5	0.7	5 cc	-	5.19	0.16
2750	2,298	12,028	174	17.2	1.3	-	-	6.86	0.11
3000	2,532	12,360	176	16.9	0.8	-	-	9.77	0.10

TYPICAL HOT PHYSICAL PROPERTIES

Prefired to °F	Hot Modulus of Rupture (psi)	Thermal Conductivity (BTU/ft^2/hr/in/°F)	Thermal Expansion (%)
250	-	17.6	
750	-	16.2	
1500	2,333	15.4	
2000	-	15.1	
2500	917	14.8	
2750	283	14.7	
3000	-	14.6	

Packaging: 72/55 lb. bags (3,960 lbs)

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