



RENO REFRACTORIES, INC

RENO CAST 8510 CR

TECHNICAL DATA SHEET

Reno Cast 8510 CR is a high alumina no cement castable with an iron chromite addition. It is high strength, low porosity and very good abrasion resistance to minimize reaction and penetration in iron and steelmaking applications with metal or slag contact.

Service Temperature: 3200°F
Water Addition: 4.75 – 5.25 %
Mixing Time: Minimum 5 minutes

Wt. Required for Estimating: 188 lbs./cu. Ft.
Storage Life: 6 months
Curing: Minimum of 70 F for 24 hours or longer for lower temperatures

TYPICAL CHEMICAL ANALYSIS (% Calcined Basis)

Al ₂ O ₃	Cr ₂ O ₃	SiO ₂	Fe ₂ O ₃	MgO	Alkalies
82.7	6.2	4.1	3.3	3.4	0.2

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 Loss (%)	Permeability (mDarcys)	Surface Area (m ² /g)
250	2500	10,000	191.0	11.7	---			0.843	8.64
750	2400	9,600	189.2	14.3	-0.1			0.390	5.67
1500	2750	9,900	187.6	14.4	-0.2	< 4		0.157	1.81
2000	4200	13,500	186.3	13.8	-0.2		60.1	1.089	0.46
2500	4000	13,900	187.2	11.5	-0.4	< 2.5		5.652	0.08
2800	5500	13,400	191.0	10.7	-0.6	< 2.5		35.344	0.02
3000	5400	13,200	191.6	11.4	-0.6			24.013	0.02

TYPICAL HOT PHYSICAL PROPERTIES

Prefired to °F	Hot Modulus of Rupture (psi)	Thermal Conductivity (BTU/ft ² /hr/in/°F)	Thermal Expansion (%)
250		18.0	0.05
750		17.4	0.21
1500		17.0	0.41
2000		16.8	0.69
2500		16.6	0.72
2750		16.5	0.71
3000		16.4	N/A

Coefficient of Thermal Expansion: 5.14 E⁻⁶ in/in/°F

Standard Cure Out Schedule: <Cure Out Schedule>

Packaging: 55 lb. Bags, 72 per Pallet (3960 lbs.)
1500 lb. Bags, 2 per Pallet (3000 lbs.)

22-001 H

PIN#690120 5/4/2022

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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