



RENO REFRACTORIES, INC

RENO CAST PIPE SHIELD

TECHNICAL DATA SHEET

RENO CAST PIPE SHIELD is an ultra-high performance ceramic that has been specially developed for shielding metallic water cooling structures from the intense radiant heat flux encountered in an electric arc furnace. The ceramic coating will greatly reduce heat losses through the water cooling and provide protection from chemical corrosion caused by gasses and slag contact. The protection also provides an electrical isolation from conductive slags and scrap. The occurrences of damage from arcing to the metallic panels can be reduced.

RENO CAST PIPE SHIELD has high density, low porosity, high strength and excellent resistance to abrasion and thermal shock.

SERVICE TEMPERATURE: 3200°F
MATERIAL REQUIRED FOR ESTIMATING: 189 lbs/cf
BINDER ADDITION: 8.5 - 9% by weight

TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

Al ₂ O ₃	SiO ₂	Fe ₂ O ₃	CaO	Cr ₂ O ₃	Alkalis
89	6.6	0.1	0.3	7.6	0.2

TYPICAL PHYSICAL PROPERTIES

Prefired to °F	Modulus of Rupture, psi	Cold Crushing Strength, psi	Linear Change %	Porosity %	Thermal "K" Btu/ft-F
250	1,700	10,500	-0.1		
1,500	2,430	15,800	-0.0	16.3	20.3
2,500	4,425	18,330	-0.8	14.4	15.9

THERMAL SHOCK LOSS, ASTM C-1171: No strength loss after shock test

HMOR, ASTM 583, at 2750°F: 451 psi (Orton)

ABRASION LOSS After 1500°F: <5 cc

ABRASION LOSS After 2500°F: <4cc

PACKAGING: 55 lb. Bags, 72 per Pallet (3960 lbs.)
1500 lb. Bags, 2 per Pallet (3000 lbs.)
2000 lb. Bags, 2 per Pallet (4000 lbs.)

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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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