RENO REFRACTORIES, INC

ElectroCast™ Petra 70

TECHNICAL DATA SHEET

ElectroCast™ Petra 70 is a mullite based, no cement castable designed to be installed by casting.

- Based on Reno's proprietary Electro Chemical bond system featuring an electrolyte for maximum performance and spherical aggregates for maximized packing.
- Micro porosity of bond phase has greatly reduced reactivity to corrosive vapors in the process.
- High hot strength and abrasion resistance.
- Low porosity and permeability for reduced penetration and reaction with molten metals, slags, and vapors.
- Recommended for molten iron transport vessels such as ladles, spouts, covers, etc. where low to moderate slag is present.

Service Temperature:	3000ºF
Storage Life:	6 months
Electrolyte Type:	E3
Addition Quantity:	4.0-5.0% (wt.)
Wt. Required for Estimating:	166 pcf
Storage Life:	6 months

TYPICAL CHEMICAL ANALYSIS (% Calcined Basis)

Al_2O_3	SiO_2	Fe_2O_3	TiO_2	Other
70	27	0.7	2	0.35

TYPICAL PHYSICAL PROPERTIES

Prefire Temperature (ºF)	Modulus of Rupture (psi)	Cold Crushing Strength (psi)	Density (pcf)	Porosity (%)	Linear Change (%)	Thermal k (Btu/in/ft2/hr)	Permeability (mDarcy) 0.3 Green
300	1,220 - 1,285	5,075 - 5,450	163	10.7	NIL	9.6	0.3
750	1,380 - 1,460	6,100 - 6,650	165	11.1	NIL	10.7	0.8
1500	1,400 - 1,500	6,735 - 7,460	166	11.9	-0.07	11.6	2.9
2000	4,095 - 4,460	13,710 - 13,895	168	10.4	-0.33	11.9	35.0
2200	3,990 – 4,340	14,215 - 14,570	167	10.5	-0.44	12.0	
2500	3,485 - 3,795	14,210 - 14,720	162	11.3	0.48	12.2	43.4
2650	4,070 - 4,340	14,005 - 14,140	163	9.0	0.22	12.3	13.3
2800	4,270 - 5,130	14,075 - 14,420	163	14.5	0.41	12.4	

Thermal Expansion Coefficient:	2.73E-6 in/in/ºF (ASTM C832)
Thermal Cycle Loss (after 2000ºF):	10.5% MOR Gain (ASTM C-1171)
Abrasion Loss After 1500ºF:	2.4 cc (ASTM C704)
Abrasion Loss After 2500ºF:	3.3 cc (ASTM C704)
Abrasion Loss After 2800ºF:	3.4 cc (ASTM C704)
Hot MOR at 2500ºF:	2665 psi
Hot MOR at 2750ºF:	863 psi

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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.

Reno Refractories, PO Box 201, Morris, Alabama 35116
205.647.0240 | Toll Free 1.800.741.7366