



TECHNICAL DATA SHEET

ElectroPump™ 52 AR is a high alumina, silicon-carbide, zirconia, no cement castable designed for cast/pump installations.

- Based on Reno's propriety Electro-Chemical bond system which utilizes a nano fluid electrolyte for ultimate performance.
- Extremely small pore size of bond prevents any entry into castable by metal or fluxes.
- Rapid dry out capability while still retaining very low porosity.
- Excellent material for applications in aluminum furnace belly band, troughs, ladles and other areas both below and above the metal line.
- Excellent resistance to alkali vapors.
- Displays excellent non-wetting by aluminum alloys.
- Excellent abrasion resistance.

Service Temperature: 2800°F
 Electrolyte Type: E11
 Addition Quantity: 4.5-5.2% (wt.)
 Wt. Required for Estimating: 167 lb/ft³
 Storage Life: 6 months

TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

Al ₂ O ₃	SiO ₂	ZrO ₂	SiC	Fe ₂ O ₃	Others
52	32	6-7	8-9	0.8	2.0

TYPICAL PHYSICAL PROPERTIES

Prefire Temperature (°F)	Modulus of Rupture (psi)	Cold Crushing Strength (psi)	Density (pcf)	Porosity (%)	Linear Change (%)	Permeability (mDarcy)	Thermal K (Btu/in/ft ² /°F)	Surface Area (m ² /g)
300	715	3,330	167.0	11.0	-0.10	3.1	14.3	3.36
750	867	3,207	165.7	13.3	0.04	4.9	12.2	3.34
1500	2,113	9,129	166.7	13.4	0.15	3.8	11.1	1.89
2000	4,625	15,002	168.2	12.7	-0.30	3.6	10.6	0.32
2500	4,771	15,015	164.8	12.5	-0.33	4.5	10.2	0.76
2650	2,228	14,021	167.0	12.1	-0.15	6.0	10.0	0.43

Thermal Expansion Coefficient: 2.52E-6 in/in/°F (ASTM C832)
 Thermal Shock Loss (after 2000°F): -3.1% MOR Loss (ASTM C-1171)

Hot MOR at 2500°F: 1,657 psi (ASTM C583)

Abrasion Loss After 1500°F: 5.1 cc (ASTM C704)
 Abrasion Loss After 2500°F: 3.7 cc (ASTM C704)

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.)
 19-124 A Revised BP 5/16/2021 pin#197830

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.