



TECHNICAL DATA SHEET

RENO NC 90 AR is a high alumina no cement material with excellent resistance to alkali attack, iron oxide reaction and penetration, thermal shock and abrasion. This material is high in alumina which allows for better thermal conductivity properties. Ease of installation, dry-out, high hot strength, low porosity, high density and high thermal shock resistance are its unique properties. This material also is resistant to alkali attack.

RENO NC 90 AR is recommended for applications in reheat furnace hearths, torpedo ladles, steel ladle barrels, delta sections and tundish back-up linings.

SERVICE TEMPERATURE: 3100°F  
 MATERIAL REQUIRED FOR ESTIMATING: 190 lbs/cf  
 STORAGE LIFE: 6 months  
 BINDER ADDITION: 8 – 9% by weight

TYPICAL CHEMICAL ANALYSIS (Calcined Basis)

<u>Al<sub>2</sub>O<sub>3</sub></u>	<u>SiO<sub>2</sub></u>	<u>Fe<sub>2</sub>O<sub>3</sub></u>	<u>TiO<sub>2</sub></u>
89 – 90	5 – 6	<1.06	2.5 – 3.0

TYPICAL PHYSICAL PROPERTIES

Prefired to °F	Modulus of Rupture, psi	Cold Crushing Strength, psi	Linear Change %	Thermal Conductivity BTU/ft <sup>2</sup> /hr/in/°F
250	650 – 1,100	5,300 – 7,800	Nil	12.5
1500	1,500 – 1,850	10,400 – 14,900	0.1	13.3
2000	1,650 – 2,300	10,500 – 13,100	-0.1	14.5
2500	2,950 – 4,600	12,500 – 15,900	-0.1	16.1
2750	3,070 – 3,800	>16,000	+0.1	17.2

APPARENT POROSITY AFTER 3000°F: 13.14%

COEFFICIENT OF THERMAL EXPANSION: 4.89 x 10<sup>-6</sup> in./in./°F

HOT MOR @2500°F (Orton): 1315 psi (Orton)

HOT MOR @2750F (Orton): 429 psi

ABRASION LOSS After 1500°F: <15 cc

ABRASION LOSS After 2000°F: <7 cc

ABRASION LOSS After 2500°F: <7 cc

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