

SAINT-GOBAIN PERFORMANCE CERAMICS & REFRACTORIES

CRYSTON[®] NICARB

NITRIDE BONDED SIC



INDUSTRY SERVED

ALUMINUM INDUSTRY

- Example Alloy wheel diecasting

OVERVIEW

Radiant tubes for alloy wheel diecasting, ISO pressed allowing for thin-walled, high-performance tubes NICARB material, these tubes excel in extreme environments, offering unmatched value for this type of application.

APPLICATION

- Protection for Electric heating elements in aluminum holding furnaces
- Gas-fired heating systems with recuperative properties

BENEFITS

Wide range of sizes

High resistance to molten aluminum attack and corrosion

High thermal conductivity and emissivity allowing lower operating temperatures

High mechanical integrity maintained at high operating temperatures

Available for electrical or recuperative gas fired systems

Standard and custom sizes available with short delivery lead times




SAINT-GOBAIN

CRYSTON® NICARB[®]

NITRIDE BONDED SIC

NICARB is a Silicon Nitride bonded Silicon Carbide material which offers high mechanical integrity which combines Silicon Carbide grain within a Silicon Nitride bonding structure.

Tubes are isostatically pressed and fired to high temperature in a nitrogen atmosphere to develop the nitride bond. Material exhibits good resistance to thermal shock, High hot strength, not wetted by molten non ferrous metals and it has good thermal conductivity making it an ideal choice for Radiant tubes.

PROPERTIES	TYPICAL VALUES		
Chemistry	SiC	74%	
	Si ₃ N ₄ + others	26%	
Max Use Temperature	1500°C (2730°F)		
Bulk Density	2.6 g/cc (162 lbs/ft³)		
Apparent Porosity	16%		
Modulus of Rupture at 1300°C	40 MPa (5800 psi)		
Thermal Expansion	4.6 x 10 ⁻⁶ °C ⁻¹ (2.6 x 10 ⁻⁶ °F ⁻¹)		
Thermal Conductivity	Temp 800°C	W/m-K 14.0	BTU-in/ hr ft ⁻² °F 97.1

STOPPERS FOR SECONDARY COPPER INDUSTRY

OVERVIEW

NICARB material, these tubes excel in extreme environments, offering unmatched value for this type of application.

APPLICATION

- Stopper Rods for metal flow control

BENEFITS

High resistance to molten copper attack and corrosion

High mechanical integrity maintained at high operating temperatures

Standard and custom sizes available with short delivery lead times

