

 GRINDWELL NORTON LIMITED	HIGH PERFORMANCE REFRACTORIES -GUJARAT	
	DEPARTMENT – Production	Date of Rev:-01.05.2013 Rev No:-
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TECHNICAL BULLETIN

N-DURANCE™ Nitride-Bonded Silicon Carbide

CN-800

N-DURANCE™ is the latest evolution in silicon nitride bonded silicon carbide from Saint-Gobain Ceramic Materials. Its superior oxidation resistance means longer life while its strength and low mass create more efficient kiln furniture designs that reduce costs.

It can be used to manufacture a variety of unique and standard kiln furniture shapes including beams, posts and plates.

Typical Chemical Analysis:

SiC	%
70	
Si ₃ N ₄	25
Oxides	5

Density:

2.75 g/cc

Apparent Porosity:

≤1%

Modulus of Rupture:

MPa

psi

20°C (68°F)

170 to 180

24,000 to 26,000

1,400°C (2,552°F)

170 to 190

24,000 to 28,000

Modulus of Elasticity:

240 GPa

35 x 10⁶ psi

Thermal Conductivity:

1,000°C (2190°F)

20 W / (m·K)

138 BTU-in. hr.ft².°F

Coefficient of Thermal Expansion:

4.4 x 10⁻⁶ per °C

2.4 x 10⁻⁶ per °F

Maximum Service Temperature:

1,450°C

2,642°F

Depending on operating conditions

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