

CoorsTek SC-BNL (SC-42) Loaded Reaction Bonded Silicon Carbide

Category : Ceramic , Carbide

Material Notes:

Thermal Shock Delta Tc = 137°C - Thermal shock tests are performed by quenching samples in water from different elevated temperatures.

Delta Tc is the change in temperature which results in a sharp decrease in the flexural strength of the sample. Data Provided by the manufacturer, CoorsTek, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CoorsTek-SC-BNL-SC-42-Loaded-Reaction-Bonded-Silicon-Carbide.php

Physical Properties	Metric	English	Comments
Density	2.90 g/cc	0.105 lb/in ³	ASTM C20
Water Absorption	0.00 %	0.00 %	ASTM 373
Particle Size	12 µm	12 µm	Thin Section Crystal Size

Mechanical Properties	Metric	English	Comments
Knoop Microhardness	23	23	1000 g
Modulus of Elasticity	150 GPa	21800 ksi	ASTM C848
Flexural Strength	90.0 MPa	13100 psi	ASTM F417
Poissons Ratio	0.20	0.20	ASTM C848
Fracture Toughness	2.90 MPa-m ^{1/2}	2.64 ksi-in ^{1/2}	Notched Beam
Shear Modulus	63.0 GPa	9140 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	3.50 µm/m-°C	1.94 µin/in-°F	ASTM C372
	@Temperature 25.0 - 1000 °C	@Temperature 77.0 - 1830 °F	
Thermal Conductivity	100 W/m-K	694 BTU-in/hr-ft ² -°F	ASTM C408
Maximum Service Temperature, Air	1000 °C	1830 °F	No Load

Descriptive Properties	Value	Comments
Color	Black	

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