

Poco Graphite SUPERSiC® Basic Silicon Carbide

Category : Ceramic , Carbide

Material Notes:

The SUPERSiC Material System allows customization of basic silicon carbide. Select from groups of infiltration materials, cleaning options, coating materials and thicknesses to optimize material for specific applications. POCO's unique conversion process produces the highest quality silicon carbide products available on the market today. This process starts with graphite material specially designed and manufactured for use as the precursor in the conversion process. Near net parts are machined in graphite, purified, and subjected to a proprietary conversion process which substitutes pure silicon atoms for carbon atoms. The result is SUPERSiC, POCO's high purity silicon carbide.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Poco-Graphite-SUPERSiC-Basic-Silicon-Carbide.php

Physical Properties	Metric	English	Comments
Bulk Density	2.53 g/cc	0.0914 lb/in ³	
Apparent Bulk Density	3.13 g/cc	0.113 lb/in ³	
Open Porosity	19 %	19 %	
Porosity	20 %	20 %	

Mechanical Properties	Metric	English	Comments
Hardness, Knoop	1992	1992	[kg/mm ²]
Tensile Strength, Yield	129 MPa	18700 psi	
Modulus of Elasticity	216 GPa	31300 ksi	
Flexural Strength	155 MPa	22500 psi	
Compressive Strength	110 MPa	16000 psi	
Poissons Ratio	0.17	0.17	
Fracture Toughness	2.30 MPa-m ^{1/2}	2.09 ksi-in ^{1/2}	
Shear Modulus	96.0 GPa	13900 ksi	Dynamic

Thermal Properties	Metric	English	Comments
CTE, linear	2.40 μm/m-°C	1.33 μin/in-°F	at RT
Thermal Conductivity	170 W/m-K	1180 BTU-in/hr-ft ² -°F	

Electrical Properties	Metric	English	Comments
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Electrical Properties	Metric	English	Comments
Descriptive Properties		Value	Comments
Specific stiffness		85 5N.m/g	
Total Impurity Level (ppm), Max		10	

Contact Songhan Plastic Technology Co.,Ltd.

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