

CeramTec CD 110 Silicon Carbide, SSiC

Category : Ceramic , Carbide

Material Notes:

Silicon carbide is extremely hard and displays excellent corrosion and thermal shock resistance. Its outstanding sliding properties and high thermal conductivity make it useful in tribological applications. SSiC is resistant to all chemical media. Since no metallic silicon is present in the matrix, it can be used at temperatures up to 1600°C without impaired strength.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CeramTec-CD-110-Silicon-Carbide-SSiC.php

Physical Properties	Metric	English	Comments
Density	3.10 g/cc	0.112 lb/in ³	DIN EN 623-2
Water Absorption	0.00 %	0.00 %	Open Porosity; DIN EN 623-2
Permeability	0.00	0.00	%, Gas
Weibull Modulus	12	12	DINV ENV 843-5

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	2500	2500	HV1; DINV ENV 843-4
Tensile Modulus	415 GPa	60200 ksi	Young's; DINV ENV 843-2
Flexural Strength	440 MPa	63800 psi	DIN EN 843-1
Compressive Strength	2000 MPa	290000 psi	DIN 51067T1
Poissons Ratio	0.16	0.16	DINV ENV 843-2
Fracture Toughness	3.80 MPa·m ^{1/2}	3.46 ksi·in ^{1/2}	K _{IC} (SEVNB); DIN CEN/TS 14425-1
Shear Modulus	179 GPa	26000 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	3.50 µm/m·°C	1.94 µin/in·°F	DIN EN 821-1
	@Temperature 20.0 - 400 °C	@Temperature 68.0 - 752 °F	
	4.30 µm/m·°C	2.39 µin/in·°F	DIN EN 821-1
	@Temperature 20.0 - 1000 °C	@Temperature 68.0 - 1830 °F	
Specific Heat Capacity	0.600 J/g·°C	0.143 BTU/lb·°F	DINV ENV 821-3
Thermal Conductivity	100 W/m·K	694 BTU·in/hr·ft ² ·°F	DIN EN 821-2

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air			
Maximum Service Temperature, Inert	1800 °C	3270 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	10 ohm-cm	10 ohm-cm	IEC 672-1
	@Temperature 400 °C	@Temperature 752 °F	
	5.00e+7 ohm-cm	5.00e+7 ohm-cm	IEC 672-1
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Descriptive Properties	Value	Comments
Ra = Arithmetic Mean Roughness Value (µm)	<0.1	
Thermal Shock Resistance R1 (K)	240	calculated; $R1 = [s? (1-\mu)] / (a \cdot E)$

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China