

CoorsTek Dura-Z™ MgO Partially Stabilized Zirconia

Category : Ceramic , Oxide , Zirconium Oxide

Material Notes:

Thermal Shock Delta Tc = 350°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-Dura-Z-MgO-Partially-Stabilized-Zirconia.php

Physical Properties	Metric	English	Comments
Density	5.72 g/cc	0.207 lb/in ³	ASTM C20
Water Absorption	0.00 %	0.00 %	ASTM 373
Particle Size	35 µm	35 µm	Thin Section Crystal Size

Mechanical Properties	Metric	English	Comments
Knoop Microhardness	11.8	11.8	1000 g
Hardness, Rockwell 45 N	77	77	
Tensile Strength, Ultimate	352 MPa	51100 psi	ACMA Test #4
Modulus of Elasticity	200 GPa	29000 ksi	ASTM C848
Flexural Strength	758 MPa	110000 psi	ASTM F417
Compressive Strength	1750 MPa	254000 psi	ASTM C773
Poissons Ratio	0.30	0.30	ASTM C848
Fracture Toughness	11.0 MPa-m ^{1/2}	10.0 ksi-in ^{1/2}	Notched Beam
Shear Modulus	77.0 GPa	11200 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	10.2 µm/m-°C @Temperature 25.0 - 1000 °C	5.67 µin/in-°F @Temperature 77.0 - 1830 °F	ASTM C372
Specific Heat Capacity	0.400 J/g-°C	0.0956 BTU/lb-°F	ASTM E1269
Thermal Conductivity	2.20 W/m-K	15.3 BTU-in/hr-ft ² -°F	ASTM C408
Maximum Service Temperature, Air	500 °C	932 °F	No Load

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00\text{e}+13$ ohm-cm	$\geq 1.00\text{e}+13$ ohm-cm	ASTM D1829
	≤ 1000 ohm-cm	≤ 1000 ohm-cm	ASTM D1829
	@Temperature 1000 °C	@Temperature 1830 °F	
	200000 ohm-cm	200000 ohm-cm	ASTM D1829
	@Temperature 500 °C	@Temperature 932 °F	
Dielectric Constant	28	28	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	9.40 kV/mm	239 kV/in	AC; ASTM D116
Dissipation Factor	0.0010	0.0010	ASTM D2520
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Descriptive Properties	Value	Comments
Color	Ivory	

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