

CoorsTek YZTP Yttria Partially Stabilized Zirconia, Hipped

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-YZTP-Yttria-Partially-Stabilized-Zirconia-Hipped.php

Physical Properties	Metric	English	Comments
Density	6.07 g/cc	0.219 lb/in ³	ASTM C20
Water Absorption	0.00 %	0.00 %	ASTM 373
Particle Size	1.0 µm	1.0 µm	Thin Section Crystal Size

Mechanical Properties	Metric	English	Comments
Knoop Microhardness	12.7	12.7	1000 g
Hardness, Rockwell 45 N	81	81	
Modulus of Elasticity	210 GPa	30500 ksi	ASTM C848
Flexural Strength	1720 MPa	249000 psi	ASTM F417
Compressive Strength	2500 MPa	363000 psi	ASTM C773
Poissons Ratio	0.23	0.23	ASTM C848
Fracture Toughness	13.0 MPa-m ^{1/2}	11.8 ksi-in ^{1/2}	Notched Beam
Shear Modulus	85.0 GPa	12300 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	10.3 µm/m-°C	5.72 µin/in-°F	ASTM C372
	@Temperature 25.0 - 1000 °C	@Temperature 77.0 - 1830 °F	
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	1500 °C	2730 °F	No Load

Electrical Properties	Metric	English	Comments
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Electrical Properties	Metric	English	Comments
	<= 1000 ohm-cm @Temperature 1000 °C	<= 1000 ohm-cm @Temperature 1830 °F	ASTM D1829
	20000 ohm-cm @Temperature 500 °C	20000 ohm-cm @Temperature 932 °F	ASTM D1829
Dielectric Constant	29 @Frequency 1e+6 Hz	29 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	9.00 kV/mm	229 kV/in	AC; ASTM D116
Dissipation Factor	0.0010 @Frequency 1e+6 Hz	0.0010 @Frequency 1e+6 Hz	ASTM D2520

Descriptive Properties	Value	Comments
Color	Ivory	

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