

CeramTec 192/193 Titania

Category : Ceramic , Oxide , Titanium Oxide

Material Notes:

192/193 is an excellent material for textile and other structural applications, where superior surface finishes are required with high chemical resistance. 193 is identical except it is metallic gray in color and conducts static electricity.

Order this product through the following link:

http://www.lookpolymers.com/polymer_CeramTec-192193-Titania.php

Physical Properties	Metric	English	Comments
Density	4.00 g/cc	0.145 lb/in ³	DIN EN 623-2 / ASTM-C373 / ASTM-C20
Water Absorption	0.00 %	0.00 %	DIN EN 623-2 / ASTM-C373

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	800	800	HV 0.5; DINV ENV 843-4
Tensile Strength at Break	51.6 MPa	7480 psi	ACMA Test #4 / DIN EN 843-1
Tensile Modulus	228 GPa	33100 ksi	Young's; DINV ENV 843-2 / ASTM-F417
Flexural Strength	137 MPa	19900 psi	20 x 40 mm
Compressive Strength	688 MPa	99800 psi	ASTM C-773-88 / DIN 51067T1
Poissons Ratio	0.27	0.27	DINV ENV 843-2
Fracture Toughness	3.20 MPa-m ^{1/2}	2.91 ksi-in ^{1/2}	DIN 51109
Shear Modulus	89.0 GPa	12900 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	8.80 µm/m-°C	4.89 µin/in-°F	DIN EN 821-1
	8.30 µm/m-°C	4.61 µin/in-°F	
	@Temperature 20.0 - 200 °C	@Temperature 68.0 - 392 °F	
	9.00 µm/m-°C	5.00 µin/in-°F	
	@Temperature 20.0 - 600 °C	@Temperature 68.0 - 1110 °F	ASTM-C373
	9.00 µm/m-°C	5.00 µin/in-°F	
	@Temperature 20.0 - 1000 °C	@Temperature 68.0 - 1830 °F	

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.700 J/g-°C @Temperature 100 - 200 °C	0.167 BTU/lb-°F @Temperature 212 - 392 °F	DIN EN 821-3
Thermal Conductivity	11.9 W/m-K	82.6 BTU-in/hr-ft²-°F	DIN EN 821-2 / ASTM-C408
Maximum Service Temperature, Air	1000 °C	1830 °F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	10000 ohm-cm	10000 ohm-cm	
	@Temperature 900 °C	@Temperature 1650 °F	
	1.70e+6 ohm-cm	1.70e+6 ohm-cm	
	@Temperature 500 °C	@Temperature 932 °F	
	9.80e+11 ohm-cm	9.80e+11 ohm-cm	IEC 672-1
	@Temperature 100 °C	@Temperature 212 °F	
	>= 1.00e+12 ohm-cm	>= 1.00e+12 ohm-cm	ASTM-D257
	@Temperature 25.0 °C	@Temperature 77.0 °F	
Dielectric Constant	85	85	IEC 672-1 / ASTM-C150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	3.937 kV/mm	100.0 kV/in	6.35 mm (1/4") IEC 672-1
Dissipation Factor	0.00050	0.00050	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.0010	0.0010	
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	0.0040	0.0040	
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	

Descriptive Properties	Value	Comments
Color	Tan/Gray	
Te Value (°C)	520	
Thermal Shock Resistance R1 (K)	330	Hasselman (Experimental)

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