

## CoorsTek PlasmaPure-UC™ 99.9% Alumina

Category : Ceramic , Oxide , Aluminum Oxide

Material Notes:

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_CoorsTek-PlasmaPure-UC-999-Alumina.php](http://www.lookpolymers.com/polymer_CoorsTek-PlasmaPure-UC-999-Alumina.php)

Physical Properties	Metric	English	Comments
Density	3.94 g/cc	0.142 lb/in <sup>3</sup>	ASTM-C 20
Particle Size	3.0 µm	3.0 µm	Average Crystal Size; THIN-SECTION

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 45 N	85	85	
Modulus of Elasticity	386 GPa	56000 ksi	ASTM-C848
Flexural Strength	414 MPa	60000 psi	MOR; ASTM-F417
Compressive Strength	2930 MPa	425000 psi	ASTM-C773
Poissons Ratio	0.24	0.24	ASTM-C848
Fracture Toughness	4.00 - 5.00 MPa-m <sup>1/2</sup>	3.64 - 4.55 ksi-in <sup>1/2</sup>	KIc; Notched Beam
Shear Modulus	156 GPa	22600 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	8.20 µm/m-°C	4.56 µin/in-°F	ASTM-C372
	@Temperature 25.0 - 1000 °C	@Temperature 77.0 - 1830 °F	
Thermal Conductivity	31.0 W/m-K	215 BTU-in/hr-ft <sup>2</sup> -°F	ASTM-C408
Maximum Service Temperature, Air	1750 °C	3180 °F	NO-LOAD COND.

Component Elements Properties	Metric	English	Comments
Al2O3	>= 99.9 %	>= 99.9 %	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.10e+7 ohm-cm	1.10e+7 ohm-cm	ASTM-D1829
	@Temperature 1000 °C	@Temperature 1830 °F	
	3.30e+12 ohm-cm	3.30e+12 ohm-cm	

Electrical Properties	Metric	English	ASTM-D1829 Comments
	>= 1.00e+14 ohm-cm @Temperature 500 °C	>= 1.00e+14 ohm-cm @Temperature 932 °F	ASTM-D1829

Descriptive Properties	Value	Comments
Color	Ivory	
Thermal Shock Resistance (°C)	200	&#916;Tc

## Contact Songhan Plastic Technology Co.,Ltd.

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