

CoorsTek Z-PLUS™ 94 Zirconia-Impr. Alumina Ceramic Armor Material

Category : Ceramic , Oxide , Aluminum Oxide

Material Notes:

CoorsTek CeraShield™ ceramics provide: low weight, high hardness, controlled, uniform microstructure, dimensional stability over wide temperature range, compatibility for use in finished armor systems with proven ballistic performance for National Institute of Justice (N.I.J.) and international design standards(C).

Order this product through the following link:

http://www.lookpolymers.com/polymer_CoorsTek-Z-PLUS-94-Zirconia-Impr-Alumina-Ceramic-Armor-Material.php

Physical Properties	Metric	English	Comments
Density	3.70 g/cc	0.134 lb/in ³	ASTM-C 20

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 45 N	78	78	
Modulus of Elasticity	303 GPa	43900 ksi	ASTM-C848
Flexural Strength	352 MPa	51100 psi	MOR; ASTM-F417
Compressive Strength	2103 MPa	305000 psi	ASTM-C773
Poissons Ratio	0.21	0.21	ASTM-C848
Fracture Toughness	4.00 - 5.00 MPa-m ^{1/2}	3.64 - 4.55 ksi-in ^{1/2}	KIc; Notched Beam
Shear Modulus	125 GPa	18100 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	22.4 W/m-K	155 BTU-in/hr-ft ² -°F	ASTM-C408

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