

CoorsTek CAP 4 98.5% 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-CAP-4-985-Alumina-Ceramic-Armor-Material.php

Physical Properties	Metric	English	Comments
Density	3.80 g/cc	0.137 lb/in ³	ASTM-C 20

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell 45 N	82	82	
Modulus of Elasticity	350 GPa	50800 ksi	ASTM-C848
Flexural Strength	375 MPa	54400 psi	MOR; ASTM-F417
Compressive Strength	2500 MPa	363000 psi	ASTM-C773
Poissons Ratio	0.22	0.22	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	143 GPa	20700 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	27.5 W/m-K	191 BTU-in/hr-ft ² -°F	ASTM-C408

Component Elements Properties	Metric	English	Comments
Al ₂ O ₃	98.5 %	98.5 %	

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