

Ceradyne Ceralloy® 147-31E Sintered Reaction Bonded Silicon Nitride (Si₃N₄)

Category : Ceramic , Nitride

Material Notes:

Ceralloy® 147 Reaction Bonded Silicon Nitride (RBSN) is a high purity grade of silicon nitride. RBSN has excellent thermal shock resistance and outstanding compatibility with non-ferrous molten metals. This lower cost alternative to the fully dense silicon nitride grades can be manufactured to close tolerance without the need for expensive diamond grinding. Features: Impact Strength Net Shape Fabrication Applications: Cutting Tools Wear Components Information provided by Ceradyne, Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer_Ceradyne-Ceralloy-147-31E-Sintered-Reaction-Bonded-Silicon-Nitride-Si₃N₄.php](http://www.lookpolymers.com/polymer_Ceradyne-Ceralloy-147-31E-Sintered-Reaction-Bonded-Silicon-Nitride-Si3N4.php)

Physical Properties	Metric	English	Comments
Density	3.30 g/cc	0.119 lb/in ³	
Porosity	0.00 %	0.00 %	
Weibull Modulus	10 - 15	10 - 15	

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	1450	1450	HV (0.3); kg/mm ²
Abrasive Hardness	825	825	Abrasive Wear Resistance Parameter
Modulus of Elasticity	310 GPa	45000 ksi	
Flexural Strength	700 MPa	102000 psi	
Poissons Ratio	0.28	0.28	
Fracture Toughness	6.00 MPa-m ^{1/2}	5.46 ksi-in ^{1/2}	
Shear Modulus	121 GPa	17500 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	3.10 μm/m-°C	1.72 μin/in-°F	
	@Temperature 20.0 - 1000 °C	@Temperature 68.0 - 1830 °F	
Thermal Conductivity	42.0 W/m-K	291 BTU-in/hr-ft ² -°F	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+14 - 1.00e+15 ohm-cm	1.00e+14 - 1.00e+15 ohm-cm	Minimum
Dielectric Constant	8.0	8.0	

Electrical Properties Descriptive Properties	Metric	English Value	Comments Comments
Purity, %		>92	
Theoretical Density, %		>99.5	
Thermal Shock Parameter, °C		524	

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