

Ceradyne Ekatherm EKasin® S Gas Pressure Sintered Silicon Nitride (Si3N4)

Category : Ceramic , Nitride

Material Notes:

EKatherm® Silicon Nitride is the state-of-the-art material for a wide variety of components used in Aluminum Alloy casting processes. Features: High Temperature Resistance High Thermal Shock Resistance Electrically Insulating Applications: Molten Metal Processing Chemical Processing Information provided by Ceradyne, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Ceradyne-Ekatherm-EKasin-S-Gas-Pressure-Sintered-Silicon-Nitride-Si3N4.php

Physical Properties	Metric	English	Comments
Density	>= 3.24 g/cc	>= 0.117 lb/in ³	
Porosity	0.00 %	0.00 %	
Weibull Modulus	25	25	

Mechanical Properties	Metric	English	Comments
Vickers Microhardness	1450	1450	HV (0.3); kg/mm ²
Abrasive Hardness	891	891	Abrasive Wear Resistance Parameter
Modulus of Elasticity	310 GPa	45000 ksi	
Flexural Strength	700 MPa	102000 psi	
Poissons Ratio	0.25	0.25	
Fracture Toughness	7.00 MPa-m ^{1/2}	6.37 ksi-in ^{1/2}	
Shear Modulus	124 GPa	18000 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	3.60 μm/m-°C	2.00 μin/in-°F	
	@Temperature 20.0 - 1000 °C	@Temperature 68.0 - 1830 °F	
Thermal Conductivity	22.0 W/m-K	153 BTU-in/hr-ft ² -°F	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	

Descriptive Properties	Value	Comments
Purity, %	>92	

Descriptive Properties	Value	Comments
Theoretical Density, %	201.5	
Thermal Shock Parameter, °C	605	

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