

Astro Met AmAlOx 68 Alumina - Aluminum Oxide

Category : Ceramic , Oxide , Aluminum Oxide

Material Notes:

General Description:AmAlOx 68 alumina (Astro Met Aluminum Oxide) is a high purity 99.8% aluminum oxide (alumina) ceramic which has been developed and optimized for maximum wear resistance and corrosion resistance. A high density, diamond like hardness, fine grain structure and superior mechanical strength are the unique properties that make AmAlOx 68 alumina the material of choice for a wide range of demanding applications. AmAlOx 68 alumina provides a cost-effective, engineered material solution in applications that require the optimum in wear resistance, corrosion resistance, high temperature stability, low thermal expansion, high stiffness to weight ratio, high dielectric strength and biocompatibility.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Astro-Met-AmAlOx-68-Alumina-Aluminum-Oxide.php

Physical Properties	Metric	English	Comments
Bulk Density	3.93 g/cc	0.142 lb/in ³	
Water Absorption	0.00 %	0.00 %	
Particle Size	4.0 µm	4.0 µm	

Mechanical Properties	Metric	English	Comments
Hardness, Vickers	2017	2017	
Modulus of Elasticity	393 GPa	57000 ksi	
Flexural Strength	382 MPa	55400 psi	
Poissons Ratio	0.22	0.22	
Fracture Toughness	5.00 MPa-m ^{1/2}	4.55 ksi-in ^{1/2}	
Shear Modulus	161 GPa	23400 ksi	Calculated

Thermal Properties	Metric	English	Comments
CTE, linear	8.20 µm/m-°C	4.56 µin/in-°F	
	@Temperature 25.0 - 1000 °C	@Temperature 77.0 - 1830 °F	
Thermal Conductivity	37.5 W/m-K	260 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	1700 °C	3090 °F	no load

Component Elements Properties	Metric	English	Comments
Al ₂ O ₃	99.8 %	99.8 %	

Component Elements Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Dielectric Constant	9.7	9.7	
Dielectric Strength	9.06 kV/mm	230 kV/in	ac-volts/mil

Descriptive Properties	Value	Comments
Color	White	
Gas Permeation, %	0	

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