PCC-Advanced Forming Technology 70% AlSiC Metal Matrix Composite

Category : Metal , Metal Matrix Composite

Material Notes:

AlSiC metal matrix composites are formed by pressure infiltrating molten aluminum into silicon carbide preforms. This method of casting is typically used in applications where solution requirements include high strength, lightweight, custom CTE and high thermal conductivity. PCC offers AlSiC with a composition varying between 30% to 74% silicon carbide by volume, depending on the application. This flexible material system allows PCC Composites to produce a part that can be tailored to exact solution requirements.Infomation provided by PCC-Advanced Forming Technology.

Order this product through the following link:
http://www.lookpolymers.com/polymer_PCC-Advanced-Forming-Technology-70-AlSiC-Metal-Matrix-Composite.php

Physical Properties	Metric	English	Comments
Density	3.04 g/cc	0.110 lb/in³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell B	99	99	
Tensile Strength, Ultimate	205 MPa	29700 psi	
Modulus of Elasticity	230 GPa	33400 ksi	
Fracture Toughness	10.6 MPa-m½	9.65 ksi-in½	

Thermal Properties	Metric	English	Comments
CTE, linear	7.00 µm/m-°C @Temperature 20.0 - 30.0 °C	3.89 µin/in-°F @Temperature 68.0 - 86.0 °F	
Thermal Conductivity	175 W/m-K	1210 BTU-in/hr-ft²-°F	
Melting Point	557 - 613 °C	1030 - 1140 °F	
Solidus	557 °C	1030 °F	
Liquidus	613 °C	1140 °F	

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