

Alliance BCN-10 Bonded (Composite) Magnetic Material

Category : Ceramic , Metal , Electronic/Magnetic Alloy

Material Notes:

Order this product through the following link:

http://www.lookpolymers.com/polymer_Alliance-BCN-10-Bonded-Composite-Magnetic-Material.php

| Physical Properties | Metric | English | Comments |
|---------------------|------------------|----------------------------------|----------|
| Density | 5.60 - 6.00 g/cc | 0.202 - 0.217 lb/in ³ | |

| Mechanical Properties | Metric | English | Comments |
|----------------------------|------------------|-------------------|----------|
| Tensile Strength, Ultimate | 37.0 MPa | 5370 psi | |
| Modulus of Elasticity | 0.700 - 1.00 GPa | 102 - 145 ksi | |
| Compressive Strength | 80.0 - 120 MPa | 11600 - 17400 psi | |

| Thermal Properties | Metric | English | Comments |
|----------------------------------|---|---|--------------|
| CTE, linear | 10.0 - 30.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 $^\circ\text{C}$ | 5.56 - 16.7 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$ | Parallel DOM |
| Specific Heat Capacity | 0.400 J/g $\cdot^\circ\text{C}$ | 0.0956 BTU/lb $\cdot^\circ\text{F}$ | |
| Thermal Conductivity | 2.00 W/m-K | 13.9 BTU-in/hr-ft ² - $^\circ\text{F}$ | |
| Maximum Service Temperature, Air | 120 $^\circ\text{C}$ | 248 $^\circ\text{F}$ | |

| Electrical Properties | Metric | English | Comments |
|-------------------------------------|----------------------------|----------------------------|-----------|
| Electrical Resistivity | 0.00100 - 0.00300 ohm-cm | 0.00100 - 0.00300 ohm-cm | |
| Magnetic Coercive Force, Hc | 5500 Oe | 5500 Oe | |
| | 9100 Oe | 9100 Oe | Intrinsic |
| Magnetic Remanence, Br | 6900 Gauss | 6900 Gauss | |
| Magnetic Maximum Energy Product, BH | 10.5 MGOe | 10.5 MGOe | |
| Curie Temperature | 300 - 470 $^\circ\text{C}$ | 572 - 878 $^\circ\text{F}$ | |

| Descriptive Properties | Value | Comments |
|---------------------------|---------------------------|----------|
| Reversible Temp Coef., Bd | -0.11 %/ $^\circ\text{C}$ | |

| Reversible Temp Coef., Hd Descriptive Properties | -0.39 %/°C Value | Comments |
|---|---------------------|------------|
| Temperature Coefficient, Br | -0.11 %/°C | (20-100°C) |
| Temperature Coefficient, Hci | -0.39 %/°C | (20-100°C) |

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