

PolyOne Trilliant™ HC HC6200-5001 XR Grey Polyamide 12 (Nylon 12)

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

The Trilliant® specialty compounds offer a complete system of specialty engineered materials, certified processes, services and technical support that enable healthcare OEM's to get to market ahead of competition. When specified, Trilliant® compound may incorporate agency rated materials that meet USP Class IV, FDA or ISO 10993 testing requirements. This Trilliant® grade is a high density specialty compound featuring a sustainable material solution for radiation shielding and weighting & balancing applications. The composite material offers a high performance thermoplastic-based alternative to lead. This compound has densities similar to traditional metals and provides greater flexibility in design and processing. Shielding properties: Attenuation coefficient at 511 keV = 0.94cm⁻¹ Half Thickness at 511 keV = 0.74cm Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Trilliant-HC-HC6200-5001-XR-Grey-Polyamide-12-Nylon-12.php

Physical Properties	Metric	English	Comments
Density	11.0 g/cc	0.397 lb/in ³	ISO 1183
Linear Mold Shrinkage	0.0040 - 0.0080 cm/cm	0.0040 - 0.0080 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	ISO 527-2/50
Elongation at Break	0.50 - 1.0 %	0.50 - 1.0 %	ISO 527-2/50
Tensile Modulus	8.00 GPa	1160 ksi	ISO 527-2/1
Flexural Strength	75.0 MPa	10900 psi	ISO 178
Flexural Modulus	10.0 GPa	1450 ksi	ISO 178
Charpy Impact Unnotched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
Thermal Conductivity	3.00 - 3.50 W/m-K	20.8 - 24.3 BTU-in/hr-ft ² -°F	Through Plane; ASTM E1461
Deflection Temperature at 0.46 MPa (66 psi)	160 °C	320 °F	Unannealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	130 °C	266 °F	Unannealed; ISO 75-2/A

Electrical Properties	Metric	English	Comments
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Surface Resistance Electrical Properties	≤ 1000 ohm Metric	≤ 1000 ohm English	IEC 60093 Comments
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Processing Properties	Metric	English	Comments
Melt Temperature	230 - 280 °C	446 - 536 °F	
Mold Temperature	65.0 - 100 °C	149 - 212 °F	
Drying Temperature	80.0 °C	176 °F	
Dry Time	4.00 hour	4.00 hour	

Descriptive Properties	Value	Comments
Appearance	Grey	
Features	High Specific Gravity	
	Non-Toxic	
Forms	Pellets	
Generic Material	Nylon 12	
Generic Name	Polyamide 12 (Nylon 12)	
Processing Method	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Uses	Housings	
	Medical/Healthcare Applications	
	Radiation Shielding	
	Weighting & Balancing	

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