Trilliant™ HC HC0200-5001 XR Grey

Thermoplastic Elastomer

Key Characteristics

Product Description

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.

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• High Specific Gravity	• Non-Toxic	
Uses	• Housings • Medical/Healthcare Applications	• Radiation Shielding • Weighting & Balancing	
Appearance	• Grey		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	8.00 g/cm³	8.00 g/cm³	ISO 1183
Molding Shrinkage	0.50 to 1.5 %	0.50 to 1.5 %	ISO 294-4
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress (Break)	435 psi	3.00 MPa	ISO 37
Tensile Elongation (Break)	200 %	200 %	ISO 37
Compression Set			ISO 815
73°F (23°C), 72 hr	20 to 30 %	20 to 30 %	
158°F (70°C), 22 hr	80 to 90 %	80 to 90 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore A, 10 sec)	85	85	ISO 48-4
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Thermal Conductivity [2]	6.9 to 14 Btu·in/hr/ft²/°F	1.0 to 2.0 W/m/K	ASTM E1461
Electrical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Surface Resistivity	1.0E+6 to 1.0E+9 ohms	1.0E+6 to 1.0E+9 ohms	IEC 60093

Additional Information

Shielding properties:
Attenuation coefficient at 511 keV = 0.83cm-1
Half Thickness at 511 keV = 0.84cm

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time	4.0 hr	4.0 hr
Processing (Melt) Temp	392 to 446 °F	200 to 230 °C
Mold Temperature	68 to 140 °F	20 to 60 °C

Notes

[1] Typical values are not to be construed as specifications.

[2] Through Plane

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