

EMS-Grivory Grivory® GCL-3H anthracite PA*-CF30

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Product description: Grivory GCL-3H anthracite is based on a combination of a heat stabilized semi-crystalline Polyamide with a partially aromatic Polyamide. The product is reinforced by 30% long carbon fibers. Grivory GCL-3H anthracite is characterized by the following key-properties: very high stiffness and strength even after conditioning and over a wide temperature range excellent notched impact resistance also at low temperatures low creep high heat distortion temperatures low moisture absorption very good dimensional stability and little warpage very little coefficient of thermal expansion very low density Grivory The product has been designed for injection molding of technical parts especially in the area of light weight metal and composite replacement. Grivory GCL-3H anthracite is used in the following market segments: sports & leisure automotive mechanical engineering The carbon fibers are aligned in parallel and are just as long as the pellets (usually 10 mm). Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-GCL-3H-anthracite-PA-CF30.php

Physical Properties	Metric	English	Comments
Density	1.28 g/cc	0.0462 lb/in ³	ISO 1183
Water Absorption	4.7 %	4.7 %	ISO 62
Moisture Absorption	1.50 %	1.50 %	ISO 62
Linear Mold Shrinkage, Transverse	0.0010 cm/cm	0.0010 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	285 MPa	41300 psi	conditioned; ISO 2039-1
	320 MPa	46400 psi	dry; ISO 2039-1
Tensile Strength at Break	215 MPa	31200 psi	dry; ISO 527-1/-2
	270 MPa	39200 psi	conditioned; ISO 527-1/-2
Elongation at Break	1.6 %	1.6 %	dry; ISO 527-1/-2
	1.7 %	1.7 %	conditioned; ISO 527-1/-2
Tensile Modulus	21.5 GPa	3120 ksi	conditioned; ISO 527-1/-2
	22.5 GPa	3260 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	dry; ISO 179/1eU
	6.50 J/cm ²	30.9 ft-lb/in ²	conditioned; ISO 179/1eU
	5.50 J/cm ²	26.2 ft-lb/in ²	dry; ISO 179/1eU

Mechanical Properties	@Temperature 30.0 °C Metric	@Temperature 86.0 °F English	Comments
	6.50 J/cm ²	30.9 ft-lb/in ²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	1.60 J/cm ²	7.61 ft-lb/in ²	dry; ISO 179/1eA
	1.60 J/cm ²	7.61 ft-lb/in ²	conditioned; ISO 179/1eA
	2.00 J/cm ²	9.52 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	2.00 J/cm ²	9.52 ft-lb/in ²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	10.0 µm/m-°C	5.56 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	25.0 µm/m-°C	13.9 µin/in-°F	ISO 11359-1/-2
Melting Point	260 °C	500 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	100 - 120 °C	212 - 248 °F	long term; EMS
	220 °C	428 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	255 °C	491 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	240 °C	464 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	3000 ohm-cm	3000 ohm-cm	dry; IEC 60093
	3000 ohm-cm	3000 ohm-cm	conditioned; IEC 60093
Surface Resistance	50 ohm	50 ohm	IEC 60093

Descriptive Properties	Value	Comments
Automotive	Automotive electr. and electronics, lighting	
	Cooling and climate control	
	Exterior	
	Fuel systems	

Descriptive Properties	Interior Value	Comments
	Powertrain and Chassis	
Electricals & Electronics	Connectors	
	Electrical appliances	
	Electrical equipment	
	Energy distribution	
Form	Granules	
Industry & Consumer goods	Housewares	
	Hydraulics & Pneumatics	
	Mechanical Engineering	
	Power transmission	
	Sports & Leisure	
	Tools & Accessories	
Processing	Injection Molding	
Product Attributes	Long Fiber Reinforced	
Special Characteristics	Anti-static	
	Improved heat resistance	

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