

EMS-Grivory Grivory® XE 5106 (GVL-4H V0) PA*-GF40

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Product description: Grivory XE 5106 black 9915 is based on a combination of a heat stabilized semi-crystalline Polyamide with a partially aromatic Polyamide. The product is flame retarded and reinforced by 40% long glass fibers. Grivory XE 5106 black 9915 is characterized by the following key-properties: flame retardancy of V-0 and 5VA at 1.6 mm Glow wire ignition > 800°C, CTI 600 Very high stiffness and strength even after conditioning and over a wide temperature range excellent notched impact resistance also at low temperatures very low creep high heat distortion temperatures slow moisture absorption very good dimensional stability and little warpage Grivory XE 5106 is halogen free and does not contain red phosphorus. It complies with the regulations acc. RoHS (2002/95/EC) and is not affected by the guideline 2002/96/EC (WEEE) for Electro-Appliances. The product has been designed for injection molding of technical parts especially in the area of flame retardant parts with no electrostatic charging possible Grivory XE 5106 (GVL-4H V0) black 9915 is used in the following market segments: automotive mechanical engineering electro-mechanical parts The glass 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-XE-5106-GVL-4H-V0-PA-GF40.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in ³	ISO 1183
Water Absorption	4.1 %	4.1 %	ISO 62
Moisture Absorption	1.10 %	1.10 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0030 cm/cm	0.0030 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	250 MPa	36300 psi	conditioned; ISO 2039-1
	265 MPa	38400 psi	dry; ISO 2039-1
Tensile Strength at Break	175 MPa	25400 psi	conditioned; ISO 527-1/-2
	200 MPa	29000 psi	dry; ISO 527-1/-2
Elongation at Break	2.1 %	2.1 %	dry; ISO 527-1/-2
	2.4 %	2.4 %	conditioned; ISO 527-1/-2
Tensile Modulus	13.0 GPa	1890 ksi	conditioned; ISO 527-1/-2
	14.5 GPa	2100 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	6.50 J/cm ²	30.9 ft-lb/in ²	conditioned; ISO 179/1eU

Mechanical Properties	Metric ^{lb/cm²}	English ^{lb/in²}	Comments ^{1/1eU}
	7.00 J/cm ²	33.3 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	7.00 J/cm ²	33.3 ft-lb/in ²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	2.50 J/cm ²	11.9 ft-lb/in ²	dry; ISO 179/1eA
	2.50 J/cm ²	11.9 ft-lb/in ²	conditioned; ISO 179/1eA
	2.50 J/cm ²	11.9 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	2.50 J/cm ²	11.9 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	20.0 µm/m-°C	11.1 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	50.0 µm/m-°C	27.8 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)	250 °C	482 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	210 °C	410 °F	ISO 75-1/-2
Flammability, UL94	V-0	V-0	IEC 60695-11-10
	5VA	5VA	IEC 60695-11-20

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	dry; IEC 60093
	1.00e+12 ohm-cm	1.00e+12 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Strength	33.0 kV/mm	838 kV/in	dry; IEC 60243-1
	33.0 kV/mm	838 kV/in	conditioned; IEC 60243-1

Comparative Tracking Index Electrical Properties	600 V Metric	600 V English	conditioned; IEC 60112 Comments
Descriptive Properties	Value		Comments
Automotive	Automotive electr. and electronics, lighting		
	Cooling and climate control		
	Exterior		
	Interior		
	Powertrain and Chassis		
Electricals & Electronics	Connectors		
	Electrical appliances		
	Electrical equipment		
	Energy distribution		
	Lighting		
Form	Granules		
Industry & Consumer goods	Heating systems		
	Housewares		
	Hydraulics & Pneumatics		
	Mechanical Engineering		
	Power transmission		
	Sports & Leisure		
	Tools & Accessories		
Processing	Injection Molding		
Product Attributes	Long Fiber Reinforced		
	Partially aromatic Polyamide		
Special Characteristics	Flame retardant		
	Improved heat resistance		

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