

EMS-Grivory Grivory® 1SBVX-50H LDS black PA1010-GF50

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Nylon

Material Notes:

Product Description: Grilamid 1SBVX-50H LDS black is a 50% glass fiber reinforced Polyamide 1010 injection molding grade. This grade is specifically optimized for the laser Direct Structuring technology of LPKF (LPKF-LDS®). The product enables selective planting and creation of electric/electronic circuits or antennas on 3D injection-molded carriers. Key properties of Grilamid 1SBVX-50H LDS black: Suited for Laser Direct Structuring (LDS) High stiffness and strength combined with high toughness Low moisture adsorption High dimensional stability Easy processing Excellent surface finish Outstanding chemical resistance Paintable Polymer primarily based on renewable resources Applications: Grilamid 1SBVX-50 H LDS black is suitable for thin-walled housings/parts with integrated electrical and mechanical functions found mainly in areas such as telecommunication, electro/electronics or automotive. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-1SBVX-50H-LDS-black-PA1010-GF50.php

Physical Properties	Metric	English	Comments
Density	1.58 g/cc	0.0571 lb/in³	ISO 1183
Water Absorption	1.7 %	1.7 %	ISO 62
Moisture Absorption	0.900 %	0.900 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0040 cm/cm	0.0040 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	195 MPa	28300 psi	conditioned; ISO 2039-1
	220 MPa	31900 psi	dry; ISO 2039-1
Tensile Strength at Break	120 MPa	17400 psi	conditioned; ISO 527-1/-2
	145 MPa	21000 psi	dry; ISO 527-1/-2
Elongation at Break	1.9 %	1.9 %	dry; ISO 527-1/-2
	2.0 %	2.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	12.0 GPa	1740 ksi	conditioned; ISO 527-1/-2
	15.0 GPa	2180 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	5.00 J/cm²	23.8 ft-lb/in²	dry; ISO 179/1eU
	5.00 J/cm²	23.8 ft-lb/in²	conditioned; ISO 179/1eU

Mechanical Properties	4.50 J/cm² Metric	21.4 ft-lb/in² English	Comments conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	5.00 J/cm²	23.8 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	1.00 J/cm²	4.76 ft-lb/in²	dry; ISO 179/1eA
	1.00 J/cm²	4.76 ft-lb/in²	conditioned; ISO 179/1eA
	0.600 J/cm²	2.86 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	0.700 J/cm²	3.33 ft-lb/in²	dry; 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	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-1/-2
Melting Point	200 °C	392 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	90.0 - 110 °C	194 - 230 °F	long term; EMS
	150 °C	302 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	175 °C	347 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	125 °C	257 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	dry; IEC 60093
	1.00e+11 ohm-cm	1.00e+11 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+10 ohm	1.00e+10 ohm	IEC 60093
Dielectric Strength	37.0 kV/mm	940 kV/in	conditioned; IEC 60243-1
	39.0 kV/mm	991 kV/in	dry; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
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Automotive Descriptive Properties	Automotive electr. and electronics, lighting Value	Comments
	Powertrain and Chassis	
Electricals & Electronics	Mobile phones and other portable devices	
Form	Granules	
Industry & Consumer goods	Medical devices	
Processing	Injection Molding	
Product Attributes	Bio based Polyamide	
	Improved flowability and demoulding	
Special Characteristics	High impact or impact modified	
	Light stabilized or stable to light	
	Platable	

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