

## EMS-Grivory Grivory® GVX-5 H nat PA\*-GF50

Category : Polymer , Thermoplastic , Nylon

### Material Notes:

Product description: Grivory GVX-5H natural is a 50% glass-fiber reinforced engineering thermoplastic material based on a combination of semi-crystalline polyamide with partially aromatic copolyamide. Grivory GVX-5H natural has an optimized flowability and is suitable for injection molding technical parts, exhibiting exceptional characteristics even after moisture absorption: high stiffness and strength, high dimensional stability, very low warpage, good chemical resistance, very good surface finish. Grivory GVX-5H natural is the economical alternative to die-cast alloys. Information provided by EMS Grivory

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_EMS-Grivory-Grivory-GVX-5-H-nat-PA-GF50.php](http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-GVX-5-H-nat-PA-GF50.php)

Physical Properties	Metric	English	Comments
Density	1.56 g/cc	0.0564 lb/in <sup>3</sup>	ISO 1183
Water Absorption	4.0 %	4.0 %	ISO 62
Moisture Absorption	1.40 %	1.40 %	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	265 MPa	38400 psi	conditioned; ISO 2039-1
	290 MPa	42100 psi	dry; ISO 2039-1
Tensile Strength at Break	220 MPa	31900 psi	conditioned; ISO 527-1/-2
	250 MPa	36300 psi	dry; ISO 527-1/-2
Elongation at Break	2.5 %	2.5 %	dry; ISO 527-1/-2
	2.5 %	2.5 %	conditioned; ISO 527-1/-2
Tensile Modulus	17.0 GPa	2470 ksi	conditioned; ISO 527-1/-2
	18.0 GPa	2610 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	7.50 J/cm <sup>2</sup>	35.7 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eU
	8.00 J/cm <sup>2</sup>	38.1 ft-lb/in <sup>2</sup>	dry; ISO 179/1eU
	6.00 J/cm <sup>2</sup> @Temperature 30.0 °C	28.6 ft-lb/in <sup>2</sup> @Temperature 86.0 °F	conditioned; ISO 179/1eU
	6.50 J/cm <sup>2</sup>	30.9 ft-lb/in <sup>2</sup>	

Mechanical Properties	Metric @ Temperature 30.0 °C	English @ Temperature 86.0 °F	dry; ISO 179/1eU Comments
Charpy Impact, Notched	1.50 J/cm <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	dry; ISO 179/1eA
	1.50 J/cm <sup>2</sup>	7.14 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eA
	1.50 J/cm <sup>2</sup> @Temperature 30.0 °C	7.14 ft-lb/in <sup>2</sup> @Temperature 86.0 °F	dry; ISO 179/1eU
	1.50 J/cm <sup>2</sup> @Temperature 30.0 °C	7.14 ft-lb/in <sup>2</sup> @Temperature 86.0 °F	conditioned; ISO 179/1eU

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)	245 °C	473 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	175 °C	347 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

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+12 ohm	1.00e+12 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	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Automotive	Air intake systems	
	Automotive electr. and electronics, lighting	
	Cooling and climate control	

Descriptive Properties	Value Exterior	Comments
	Interior	
	Powertrain and Chassis	
Electricals & Electronics	Connectors	
	Electrical appliances	
	Electrical equipment	
	Energy distribution	
	Mobile phones and other portable devices	
Form	Granules	
Industry & Consumer goods	Housewares	
	Hydraulics & Pneumatics	
	Mechanical Engineering	
	Power transmission	
	Sanitary, water and gas supply	
	Sports & Leisure	
	Tools & Accessories	
Processing	Injection Molding	
Product Attributes	Partially aromatic Polyamide	

## Contact Songhan Plastic Technology Co.,Ltd.

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