

EMS-Grivory Grivory® G4V-5H nat PA*-GF50

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Product description: Grivory G4V-5H is a 50% glass fiber reinforced engineering thermoplastic material based on a semi-crystalline partially aromatic copolyamide. Grivory G4V-5H is used for injection molding technical parts, exhibiting exceptional characteristics even after moisture absorption: high stiffness and strengthdimensional stability, low warpagegood chemical resistancegood surface finish Grivory G4V-5H is the economical alternative to die-cast alloys. It is suitable for production of technical parts in the application fields of:Electro / ElectronicsAutomotiveMechanical engineeringDomestic appliancesInformation provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-G4V-5H-nat-PA-GF50.php

Physical Properties	Metric	English	Comments
Density	1.59 g/cc	0.0574 lb/in ³	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	0.0040 cm/cm	0.0040 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	275 MPa	39900 psi	conditioned; ISO 2039-1
	290 MPa	42100 psi	dry; ISO 2039-1
Tensile Strength at Break	200 MPa	29000 psi	conditioned; ISO 527-1/-2
	240 MPa	34800 psi	dry; ISO 527-1/-2
Elongation at Break	2.0 %	2.0 %	dry; ISO 527-1/-2
	2.5 %	2.5 %	conditioned; ISO 527-1/-2
Tensile Modulus	16.5 GPa	2390 ksi	conditioned; ISO 527-1/-2
	16.5 GPa	2390 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	8.00 J/cm ²	38.1 ft-lb/in ²	dry; ISO 179/1eU
	8.00 J/cm ²	38.1 ft-lb/in ²	conditioned; ISO 179/1eU
	5.00 J/cm ²	23.8 ft-lb/in ²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	6.00 J/cm ²	28.6 ft-lb/in ²	

Mechanical Properties	Metric @ Temperature 30.0 °C	English @ Temperature 86.0 °F	dry; ISO 179/1eU Comments
Charpy Impact, Notched	1.40 J/cm ²	6.66 ft-lb/in ²	conditioned; ISO 179/1eA
	1.50 J/cm ²	7.14 ft-lb/in ²	dry; ISO 179/1eA
	1.40 J/cm ² @Temperature 30.0 °C	6.66 ft-lb/in ² @Temperature 86.0 °F	conditioned; ISO 179/1eU
	1.50 J/cm ² @Temperature 30.0 °C	7.14 ft-lb/in ² @Temperature 86.0 °F	dry; ISO 179/1eU

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	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-1/-2
Melting Point	235 °C	455 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	140 °C	284 °F	long term; EMS
	220 °C	428 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	215 °C	419 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	165 °C	329 °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+13 ohm-cm	1.00e+13 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Strength	35.0 kV/mm	889 kV/in	dry; IEC 60243-1
	35.0 kV/mm	889 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	
	Compressed air systems	

Descriptive Properties	Value	Comments
	Cooling and climate control	
	Exterior	
	Fuel systems	
Electricals & Electronics	Electrical equipment	
	Energy distribution	
	Lighting	
Form	Granules	
Processing	Injection Molding	
Product Attributes	Barrier Properties	
	Co Polyamide	
	High viscosity	
	Long Fiber Reinforced	
	Masterbatch	
	Nucleated	
	Transparent Polyamide	

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