

## EMS-Grivory Grivory® LBV-50H FWA nat PA12-GF50

Category : Polymer , Thermoplastic , Nylon , Nylon 12 , Nylon 12, 50% Glass Fiber Filled

### Material Notes:

**Product Description:** Grilamid LBV-50H FWA natural is a 50% glass fiber reinforced, heat stabilized polyamide 12 injection molding grade with the following special features: High stiffness combined with high toughness High elongation Very low water absorption Hydrolysis and chemical resistance Easy processing, particularly suitable for very thin- or very thick-walled moldings The special composition of Grilamid LBV-50H FWA natural makes it suitable for direct contact with drinking water up to 85°C as well as with foodstuff. Application examples: Grilamid LBV-50H FWA natural is designed for applications predominantly in the following application fields: Robust valves and fittings for water and gas supply. Taps, fittings, meters, pumps in sanitary equipment Domestic appliances and household goods Components in the food processing industry

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_EMS-Grivory-Grivory-LBV-50H-FWA-nat-PA12-GF50.php](http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-LBV-50H-FWA-nat-PA12-GF50.php)

Physical Properties	Metric	English	Comments
Density	1.47 g/cc	0.0531 lb/in <sup>3</sup>	ISO 1183
Water Absorption	0.80 %	0.80 %	ISO 62
Moisture Absorption	0.400 %	0.400 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	86	86	conditioned, 15s; ISO 868
Ball Indentation Hardness	190 MPa	27600 psi	conditioned; ISO 2039-1
Tensile Strength at Break	160 MPa	23200 psi	conditioned; ISO 527-1/-2
	170 MPa	24700 psi	dry; ISO 527-1/-2
Elongation at Break	5.0 %	5.0 %	dry; ISO 527-1/-2
	5.0 %	5.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	12.5 GPa	1810 ksi	conditioned; ISO 527-1/-2
	13.5 GPa	1960 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	9.00 J/cm <sup>2</sup>	42.8 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eU
	9.50 J/cm <sup>2</sup>	45.2 ft-lb/in <sup>2</sup>	dry; ISO 179/1eU
	9.00 J/cm <sup>2</sup>	42.8 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eU

Mechanical Properties	@Temperature 30.0 °C Metric	@Temperature 86.0 °F English	Comments
	9.50 J/cm <sup>2</sup>	45.2 ft-lb/in <sup>2</sup>	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	1.80 J/cm <sup>2</sup>	8.57 ft-lb/in <sup>2</sup>	dry; ISO 179/1eA
	1.80 J/cm <sup>2</sup>	8.57 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eA
	1.40 J/cm <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	1.40 J/cm <sup>2</sup>	6.66 ft-lb/in <sup>2</sup>	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	15.0 µm/m-°C	8.33 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
Melting Point	178 °C	352 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	90.0 - 120 °C	194 - 248 °F	long term; EMS
	150 °C	302 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	160 °C	320 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	110 °C	230 °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	conditioned; IEC 60093
Surface Resistance	1.00e+11 ohm	1.00e+11 ohm	IEC 60093
Dielectric Strength	40.0 kV/mm	1020 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	60 V	60 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Food contact	EU Requirements	
	FDA	
Form	Granules	

Industry & Consumer goods Descriptive Properties	Heating systems Value	Comments
	Sanitary, water and gas supply	
Processing	Injection Molding	
Product Attributes	Hydrolysis resistant	
Special Characteristics	High impact or impact modified	
	Improved heat resistance	
	Improved UV resistance (outdoor use)	
Water Contact	ACS	
	DVGW W270	
	KTW	
	NSF 61	
	WRAS	

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