

EMS-Grivory Grivory® L 20 H FR PA12 FR

Category : Polymer , Thermoplastic , Nylon , Nylon 12 , Nylon 12, Flame Retardant

Material Notes:

Product Description: Grilamid L 20 H FR is a flame retarded, medium viscosity product, based on Polyamide 12 (PA12). Grilamid L 20 H FR contains no halogen or phosphorus, it has a light natural color and is heat stabilized. Grilamid L 20 H FR is used for production of high value injection molding and extrusion parts. The special features of Grilamid L 20 H FR are: Flame resistant, UL94 V-2 at 0.8 mm Halogen and phosphorus free Light natural color Glow wire temperature 960°C at 1mm Heat stability Good chemical resistance High surface quality Good dimensional stability High processing speed Low density, low weight

Application examples: Grilamid L 20 H FR is suitable for injection molding and extrusion parts in electro/electronic applications.

Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-L-20-H-FR-PA12-FR.php

Physical Properties	Metric	English	Comments
Density	1.05 g/cc	0.0379 lb/in ³	ISO 1183
Water Absorption	1.4 %	1.4 %	ISO 62
Moisture Absorption	0.700 %	0.700 %	ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	72	72	conditioned, 15s; ISO 868
Tensile Strength at Break	35.0 MPa	5080 psi	conditioned; ISO 527-1/-2
	40.0 MPa	5800 psi	dry; ISO 527-1/-2
Tensile Strength, Yield	40.0 MPa	5800 psi	dry; ISO 527-1/-2
	50.0 MPa	7250 psi	dry; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
	<= 50 %	<= 50 %	dry; ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	dry; ISO 527-1/-2
	10 %	10 %	conditioned; ISO 527-1/-2
Tensile Modulus	1.50 GPa	218 ksi	conditioned; ISO 527-1/-2
	1.90 GPa	276 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	dry; ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	NB	NB	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	dry; ISO 179/1eU
	NB	NB	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	conditioned; ISO 179/1eU
Charpy Impact, Notched	0.500 J/cm²	2.38 ft-lb/in²	dry; ISO 179/1eA
	0.700 J/cm²	3.33 ft-lb/in²	conditioned; ISO 179/1eA
	0.600 J/cm²	2.86 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	dry; ISO 179/1eU
	0.600 J/cm²	2.86 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	conditioned; ISO 179/1eU

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	120 µm/m-°C	66.7 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 - 110 °C	194 - 230 °F	long term; EMS
	150 °C	302 °F	short term; EMS
Deflection Temperature at 0.46 MPa (66 psi)	130 °C	266 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	50.0 °C	122 °F	ISO 75-1/-2
Flammability, UL94	V-2	V-2	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Strength	34.0 kV/mm	864 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Automotive	Automotive electr. and electronics, lighting	

Descriptive Properties Electricals & Electronics	Value Cables & Tubes	Comments
	Connectors	
	Energy distribution	
Form	Granules	
Processing	Other Extrusion	
Special Characteristics	Flame retardant	
	Improved heat resistance	
	Improved UV resistance (outdoor use)	

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