

EMS-Grivory Grivory® LM-05 HX nat PA12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

Product description: Grilamid LM-05 HX natural is a medium viscosity, heat-stabilized nanocomposite PA12 extrusion and injection molding grade. The special features of Grilamid LM-05 HX natural are: Low coefficient of thermal expansion High stiffness and strength compared to standard PA12 Good dimensional stability Good chemical resistance Good heat- and weathering resistance Low moisture absorption The material is especially designed for tight buffering or compact (semi-tight) buffering of optical fibers as well as for technical injection molding components in electro/electronic, automotive, mechanical and safety engineering, household appliances and sanitary installations. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-LM-05-HX-nat-PA12.php

Physical Properties	Metric	English	Comments
Density	1.03 g/cc	0.0372 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	0.0090 cm/cm	0.0090 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	75	75	conditioned, 15s; ISO 868
Ball Indentation Hardness	80.0 MPa	11600 psi	conditioned; ISO 2039-1
Tensile Strength at Break	50.0 MPa	7250 psi	conditioned; ISO 527-1/-2
Tensile Strength, Yield	45.0 MPa	6530 psi	
Elongation at Break	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
Elongation at Yield	7.0 %	7.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	1.70 GPa	247 ksi	conditioned; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	conditioned; ISO 179/1eU
	NB	NB	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	conditioned; ISO 179/1eA
	0.600 J/cm ²	2.86 ft-lb/in ²	conditioned; ISO 179/1eU

Mechanical Properties	Metric @ Temperature 30.0 °C	English @ Temperature 86.0 °F	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	125 µm/m-°C	69.4 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)	125 °C	257 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	75.0 °C	167 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	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	50.0 kV/mm	1270 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Electricals & Electronics	Cables & Tubes	
Form	Granules	
Processing	Other Extrusion	
Product Attributes	Nanocomposite	
Special Characteristics	Improved heat resistance	
	Improved UV resistance (outdoor use)	

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