

EMS-Grivory Grivory® XE 4105 nat PA610-GF50

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Nylon , Nylon 610 , Nylon 610, Glass Reinforced

Material Notes:

Product description: Grilamid XE 4105 natural is a 50% glass fiber reinforced, heat stabilized polyamide 610 (PA610) injection molding grade. This product is to a large extent based on renewable raw materials and its eco-profile is very favorable when compared to similar products based on crude oil. The main features of Grilamid XE 4105 are: High stiffness Low water absorption Good heat and chemical resistance Easy processing Grilamid XE 4105 natural is particularly suitable for the manufacturing of technical injection molded parts in the application fields of: Automotive Electrical & Electronic goods Mechanical engineering Sports & leisure goods Domestic appliances Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-4105-nat-PA610-GF50.php

Physical Properties	Metric	English	Comments
Density	1.53 g/cc	0.0553 lb/in ³	ISO 1183
Water Absorption	1.9 %	1.9 %	ISO 62
Moisture Absorption	0.800 %	0.800 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	165 MPa	23900 psi	conditioned; ISO 2039-1
	225 MPa	32600 psi	dry; ISO 2039-1
Tensile Strength at Break	165 MPa	23900 psi	conditioned; ISO 527-1/-2
	210 MPa	30500 psi	dry; ISO 527-1/-2
Elongation at Break	4.0 %	4.0 %	dry; ISO 527-1/-2
	5.5 %	5.5 %	conditioned; ISO 527-1/-2
Tensile Modulus	12.0 GPa	1740 ksi	conditioned; ISO 527-1/-2
	15.5 GPa	2250 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	9.00 J/cm ²	42.8 ft-lb/in ²	conditioned; ISO 179/1eU
	9.50 J/cm ²	45.2 ft-lb/in ²	dry; ISO 179/1eU
	9.00 J/cm ² @Temperature 30.0 °C	42.8 ft-lb/in ² @Temperature 86.0 °F	conditioned; ISO 179/1eU

Mechanical Properties	Metric ¹ /cm ²	English ^{1b} /in ²	Comments
	@Temperature 30.0 °C	@Temperature 86.0 °F	dry; ISO 179/1eU
Charpy Impact, Notched	1.70 J/cm ²	8.09 ft-lb/in ²	dry; ISO 179/1eA
	2.00 J/cm ²	9.52 ft-lb/in ²	conditioned; ISO 179/1eA
	1.40 J/cm ²	6.66 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	1.40 J/cm ²	6.66 ft-lb/in ²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	

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	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-1/-2
Melting Point	225 °C	437 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	100 - 130 °C	212 - 266 °F	long term; EMS
	160 °C	320 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	150 °C	302 °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+11 ohm	1.00e+11 ohm	IEC 60093
Dielectric Strength	41.0 kV/mm	1040 kV/in	conditioned; IEC 60243-1
	42.0 kV/mm	1070 kV/in	dry; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Automotive	Air intake sytems	
	Automotive electr. and electronics, lighting	

Descriptive Properties	Value	Comments
	Cooling and climate control	
	Exterior	
	Fuel systems	
	Hydraulic systems	
	Interior	
	Powertrain and Chassis	
Electricals & Electronics	Connectors	
	Electrical appliances	
	Electrical equipment	
	Lighting	
	Mobile phones and other portable devices	
Form	Granules	
Industry & Consumer goods	Housewares	
	Hydraulics & Pneumatics	
	Mechanical Engineering	
	Power transmission	
	Sports & Leisure	
	Tools & Accessories	
Processing	Injection Molding	
Product Attributes	Bio based Polyamide	
Special Characteristics	Improved heat resistance	
	Improved UV resistance (outdoor use)	
	Light stabilized or stable to light	

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