EMS-Grivory Grivory® XE 4116 nat PA1010-GF55

Category : Polymer , Renewable/Recycled Polymer , Thermoplastic , Nylon

Material Notes:

Product description: Grilamid XE 4116 natural is a 55% glass fiber reinforced Polyamide 1010 injection molding grade. This grade is especially suitable for the manufacturing of thin-walled, painted parts in complex designs. Grilamid XE 4116 natural has the following product profile: Polymer based primarily on renewable resourcesHigh stiffness and strengthExcellent impact and notched impact strengthImproved warpage performanceImproved flowabilityEasy processingExcellent surface finishGood UV and chemical resistanceImproved paint adhesion Grilamid XE 4116 natural is suitable for the manufacturing of production of moldings in the application fields of: Electronic devicesAutomotive structural partsMechanical engineering, industry goodsSports & leisure goodsInformation provided by EMS Grivory

Order this product through the following link:
http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-4116-nat-PA1010-GF55.php

Physical Properties	Metric	English	Comments
Density	1.59 g/cc	0.0574 lb/in³	ISO 1183
Water Absorption	1.7 %	1.7 %	ISO 62
Moisture Absorption	0.900 %	0.900 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0030 cm/cm	0.0030 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	215 MPa	31200 psi	conditioned; ISO 2039-1
	230 MPa	33400 psi	dry; ISO 2039-1
Tensile Strength at Break	180 MPa	26100 psi	conditioned; ISO 527-1/-2
	210 MPa	30500 psi	dry; ISO 527-1/-2
Elongation at Break	2.5 %	2.5 %	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
	17.5 GPa	2540 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	7.50 J/cm²	35.7 ft-lb/in²	conditioned; ISO 179/1eU
	9.00 J/cm²	42.8 ft-lb/in²	dry; ISO 179/1eU
	8.00 J/cm²	38.1 ft-lb/in²	conditioned; ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	8.50 J/cm²	40.4 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	1.50 J/cm²	7.14 ft-lb/in²	conditioned; ISO 179/1eA
	2.00 J/cm²	9.52 ft-lb/in²	dry; ISO 179/1eA
	1.40 J/cm²	6.66 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	1.50 J/cm²	7.14 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	

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	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-1/-2
Melting Point	200 °C	392 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	100 °C	212 °F	long term; EMS
	150 °C	302 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	185 °C	365 °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+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Strength	36.0 kV/mm	914 kV/in	dry; IEC 60243-1
	36.0 kV/mm	914 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	Value	Comments
	Compressed air systems	
	Exterior	
	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	
	Medical devices	
	Power transmission	
	Sports & Leisure	
	Tools & Accessories	
Processing	Injection Molding	
Product Attributes	Bio based Polyamide	
	Improved flowability and demoulding	
Special Characteristics	High impact or impact modified	
	Improved UV resistance (outdoor use)	

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