

EMS-Grivory Grivory® TR XE 4010 PA*-I

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Product description: Grilamid XE 4010 is an amorphous cycloaliphatic copolyamide based on 58 % renewable resources. The material is designed for applications where high chemical resistance, high fatigue strength and toughness is required. The material is resistant to boiling water, a broad range of chemicals and to stress cracking. Articles can be easily produced by injection molding or extrusion. Grilamid XE 4010 offers a variety of interesting properties such as: High transparency High gloss High fatigue strength Resistance to boiling water Resistance to a broad range of solvents and chemicals Excellent toughness Low density Outstanding weather resistance Grilamid XE 4010 is suitable for optical and technically demanding parts. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-TR-XE-4010-PA-I.php

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in ³	ISO 1183
Water Absorption	3.8 %	3.8 %	ISO 62
Moisture Absorption	1.80 %	1.80 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 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
Ball Indentation Hardness	110 MPa	16000 psi	conditioned; ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	conditioned; ISO 527-1/-2
Tensile Strength, Yield	65.0 MPa	9430 psi	conditioned; ISO 527-1/-2
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 @Temperature 30.0 °C	NB @Temperature 86.0 °F	conditioned; ISO 179/1eU
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	conditioned; ISO 179/1eA
	1.00 J/cm ² @Temperature 30.0 °C	4.76 ft-lb/in ² @Temperature 86.0 °F	conditioned; ISO 179/1eU

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	100 µm/m-°C	55.6 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	ISO 11359-1/-2
Maximum Service Temperature, Air	60.0 - 80.0 °C	140 - 176 °F	long term; EMS
	90.0 °C	194 °F	short term; EMS
Transformation Temperature, Tg	118 °C	244 °F	10°C/min; ISO 11357-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	105 °C	221 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 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	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Additives	Lubricants	
Automotive	Compressed air systems	
	Fuel systems	
Electricals & Electronics	Connectors	
	Electrical appliances	
	Electrical equipment	
	Energy distribution	
	Lighting	
	Mobile phones and other portable devices	
Form	Granules	
Industry & Consumer goods	Housewares	
	Mechanical Engineering	

Descriptive Properties	Medical devices Value	Comments
Optics	Spectacle frames	
Processing	Injection Molding	
Product Attributes	Bio based Polyamide	
	Co Polyamide	
	Hydrolysis resistant	
	Transparent Polyamide	
Special Characteristics	High impact or impact modified	

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