

EMS-Grivory Grivory® XE 4101 black 9225 PA*-GF40

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Product description: Grivory XE 4101 is a 40% glass fiber reinforced engineering thermoplastic material based on a semi-crystalline, partially aromatic copolyamide. This Grivory HT product is partially based on renewable raw materials. ISO polymer designation: PA 10T/X ASTM designation: PPA, polyphthalamide. Grivory XE 4101 is an injection molding material. The main distinguishing feature of Grivory HT, when compared to other polyamides, is its good performance at high temperatures. Parts made of Grivory HT provide high stiffness and heat distortion temperatures. Further attributes of Grivory HT are the low moisture absorption, good dimensional stability and excellent chemical resistance. Grivory XE 4101 is suitable for engineering thermoplastic applications with the requirement for approvals in contact with food or drinking water. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-4101-black-9225-PA-GF40.php

Physical Properties	Metric	English	Comments
Density	1.49 g/cc	0.0538 lb/in ³	ISO 1183
Water Absorption	2.0 %	2.0 %	ISO 62
Moisture Absorption	0.900 %	0.900 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	220 MPa	31900 psi	dry; ISO 2039-1
	230 MPa	33400 psi	conditioned; ISO 2039-1
Tensile Strength at Break	175 MPa	25400 psi	conditioned; ISO 527-1/-2
	190 MPa	27600 psi	dry; ISO 527-1/-2
Elongation at Break	2.6 %	2.6 %	conditioned; ISO 527-1/-2
	2.8 %	2.8 %	dry; ISO 527-1/-2
Tensile Modulus	13.0 GPa	1890 ksi	conditioned; ISO 527-1/-2
	13.0 GPa	1890 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	7.50 J/cm ²	35.7 ft-lb/in ²	conditioned; ISO 179/1eU
	8.50 J/cm ²	40.4 ft-lb/in ²	dry; ISO 179/1eU
	7.00 J/cm ²	33.3 ft-lb/in ²	conditioned; ISO 179/1eU

Mechanical Properties	@Temperature 30.0 °C Metric	@Temperature 86.0 °F English	Comments
	8.00 J/cm²	38.1 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	1.00 J/cm²	4.76 ft-lb/in²	dry; ISO 179/1eA
	1.00 J/cm²	4.76 ft-lb/in²	conditioned; ISO 179/1eA
	0.800 J/cm²	3.81 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	0.900 J/cm²	4.28 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	20.0 µm/m-°C	11.1 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-1/-2
Melting Point	295 °C	563 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	150 °C	302 °F	long term; EMS
	250 °C	482 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	265 °C	509 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	190 °C	374 °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	31.0 kV/mm	787 kV/in	conditioned; IEC 60243-1
	32.0 kV/mm	813 kV/in	dry; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Electricals & Electronics	Connectors	

Descriptive Properties	Electrical appliances Value	Comments
	Energy distribution	
Food contact	EU Requirements	
	FDA	
	NSF 51	
Form	Granules	
Industry & Consumer goods	Housewares	
	Tools & Accessories	
Processing	Injection Molding	
Product Attributes	Bio based Polyamide	
	Co Polyamide	
	Hydrolysis resistant	
	Improved alcohol resistance	
	Improved flowability and demoulding	
	Partially aromatic Polyamide	
Special Characteristics	Improved heat resistance	
Water Contact	ACS	
	DVGW W270	
	KTW	
	NSF 61	
	WRAS	

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