EMS-Grivory Grivory® HT XE 3996 PA*-GF30

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

Material Notes:

Product description: Grivory XE 3996 black 9225 is a 30% glass fiber reinforced engineering thermoplastic material based on a semi-crystalline, partially aromatic copolyamide. ISO-Polymer designation: PA 10T/X ASTM-Designation: PPA, polyphthalamide The main distinguishing features of Grivory HT-PPA, when compared to other polyamides, are its good performance at high temperatures providing parts which are stiffer, stronger, have better heat distortion and dimensional stability as well as excellent chemical resistance and low moisture absorption. Grivory XE 3996 black 9225 is especially suitable for injection molded components in electrical and electronic applications. The material is suitable for lead-free SMT reflow soldering acc. i.e. JEDEC J-STD-020C (peak temperature 260°C). Components conforming to JEDEC MSL1 are achievable.Information provided by EMS Grivory

Order this product through the following link:
http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-HT-XE-3996-PA-GF30.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in³	ISO 1183
Water Absorption	2.0 %	2.0 %	ISO 62
Moisture Absorption	0.800 %	0.800 %	ISO 62
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	225 MPa	32600 psi	dry; ISO 2039-1
	225 MPa	32600 psi	conditioned; ISO 2039-1
Tensile Strength at Break	150 MPa	21800 psi	dry; ISO 527-1/-2
	150 MPa	21800 psi	conditioned; ISO 527-1/-2
Elongation at Break	2.0 %	2.0 %	dry; ISO 527-1/-2
	2.0 %	2.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	9.50 GPa	1380 ksi	conditioned; ISO 527-1/-2
	9.50 GPa	1380 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	4.00 J/cm²	19.0 ft-lb/in²	dry; ISO 179/1eU
	4.00 J/cm²	19.0 ft-lb/in²	conditioned; ISO 179/1eU
	4.00 J/cm²	19.0 ft-lb/in²	dry; ISO 179/1eU

Mechanical Properties	Metric	English	Comments
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	4.00 J/cm²	19.0 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	0.700 J/cm²	3.33 ft-lb/in²	dry; ISO 179/1eA
	0.700 J/cm²	3.33 ft-lb/in²	conditioned; ISO 179/1eA
	0.700 J/cm²	3.33 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	0.700 J/cm²	3.33 ft-lb/in²	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	65.0 µm/m-°C	36.1 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
Deflection Temperature at 1.8 MPa (264 psi)	260 °C	500 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	140 °C	284 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10
	HB	HB	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+11 ohm-cm	1.00e+11 ohm-cm	dry; IEC 60093
	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	33.0 kV/mm	838 kV/in	dry; IEC 60243-1
	33.0 kV/mm	838 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments

Descriptive Properties	Value	Comments
Automotive	Cooling and climate control	
	Exterior	
	Fuel systems	
	Interior	
	Powertrain and Chassis	
Electricals & Electronics	Electrical appliances	
	Electrical equipment	
	Energy distribution	
	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	
	Hydrolysis resistant	
Special Characteristics	Improved heat resistance	
	Improved UV resistance (outdoor use)	

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