

EMS-Grivory Grivory® XE 4102 black 9238 PA*-CF30

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Grivory XE 4102 is a 30% carbon 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 4102 is an injection molding material. It has a low density and is electrically conducting 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. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-4102-black-9238-PA-CF30.php

Physical Properties	Metric	English	Comments
Density	1.26 g/cc	0.0455 lb/in ³	ISO 1183
Water Absorption	2.5 %	2.5 %	ISO 62
Moisture Absorption	1.20 %	1.20 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	250 MPa	36300 psi	dry; ISO 2039-1
	250 MPa	36300 psi	conditioned; ISO 2039-1
Tensile Strength at Break	250 MPa	36300 psi	dry; ISO 527-1/-2
	250 MPa	36300 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	23.0 GPa	3340 ksi	conditioned; ISO 527-1/-2
	23.0 GPa	3340 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	6.00 J/cm ²	28.6 ft-lb/in ²	dry; ISO 179/1eU
	6.00 J/cm ²	28.6 ft-lb/in ²	conditioned; ISO 179/1eU
	6.00 J/cm ² @Temperature 30.0 °C	28.6 ft-lb/in ² @Temperature 86.0 °F	dry; ISO 179/1eU

Mechanical Properties	Metric ^{lb/in²}	English ^{lb/in²}	Comments
	@Temperature 30.0 °C	@Temperature 86.0 °F	conditioned; ISO 179/1eU
Charpy Impact, Notched	0.800 J/cm²	3.81 ft-lb/in²	dry; ISO 179/1eA
	0.800 J/cm²	3.81 ft-lb/in²	conditioned; ISO 179/1eA
	0.600 J/cm²	2.86 ft-lb/in²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	0.600 J/cm²	2.86 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	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	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)	270 °C	518 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	210 °C	410 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	5000 ohm-cm	5000 ohm-cm	dry; IEC 60093
	5000 ohm-cm	5000 ohm-cm	conditioned; IEC 60093
Surface Resistance	15 ohm	15 ohm	IEC 60093
Dielectric Strength	3.00 kV/mm	76.2 kV/in	dry; IEC 60243-1
	3.00 kV/mm	76.2 kV/in	conditioned; IEC 60243-1

Descriptive Properties	Value	Comments
Automotive	Powertrain and Chassis	
Electricals & Electronics	Electrical equipment	
Form	Granules	

Descriptive Properties	Value	Comments
	Mechanical Engineering	
	Sanitary, water and gas supply	
Processing	Injection Molding	
Product Attributes	Bio based Polyamide	
	Co Polyamide	
	Hydrolysis resistant	
	Improved alcohol resistance	
	Partially aromatic Polyamide	
Special Characteristics	Improved heat resistance	

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