

EMS-Grivory Grivory® XE 4120 black 9916 PA*-GF30

Category : Polymer , Thermoplastic , Nylon

Material Notes:

Product description: Grivory XE 4120 black 9916 is a 30% glass fiber reinforced flame retardant (UL 94 V-0) engineering thermoplastic material based on a semi-crystalline, partially aromatic copolyamide. Grivory XE 4120 black 9916 is free of halogens and red phosphorus.

RoHS: Grivory XE 4120 black 9916 is in compliance with RoHS (2002/95/EC, Restriction of Hazardous Substances). WEEE: Parts produced from Grivory XE 4120 black 9916 are not subject to "selective treatment" according the Directive 2002/96/EC on Waste Electrical and Electronic Equipment.

ISO polymer designation: PA 10T/X **ASTM designation:** PPA, polyphthalamide

The main distinguishing features of Grivory HT, 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 4120 black 9916 is especially suitable for injection molded components in electrical and electronic applications which require a flame class acc. UL 94 V-0. The material is suitable for lead-free SMT reflow soldering (peak temperature 260°C). Components conforming to JEDEC J-STD-020C MSL1 are achievable. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-4120-black-9916-PA-GF30.php

Physical Properties	Metric	English	Comments
Density	1.43 g/cc	0.0517 lb/in ³	ISO 1183
Water Absorption	2.2 %	2.2 %	ISO 62
Moisture Absorption	1.10 %	1.10 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	255 MPa	37000 psi	dry; ISO 2039-1
	255 MPa	37000 psi	conditioned; ISO 2039-1
Tensile Strength at Break	145 MPa	21000 psi	conditioned; ISO 527-1/-2
	150 MPa	21800 psi	dry; 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	11.5 GPa	1670 ksi	conditioned; ISO 527-1/-2
	11.5 GPa	1670 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	5.00 J/cm ²	23.8 ft-lb/in ²	conditioned; ISO 179/1eU

Mechanical Properties	Metric ¹ /cm ²	English ^{1b} /in ²	Comments ^{1f} /1eU
	4.50 J/cm ²	21.4 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	4.50 J/cm ²	21.4 ft-lb/in ²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	0.800 J/cm ²	3.81 ft-lb/in ²	dry; ISO 179/1eA
	0.800 J/cm ²	3.81 ft-lb/in ²	conditioned; ISO 179/1eA
	0.600 J/cm ²	2.86 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	0.600 J/cm ²	2.86 ft-lb/in ²	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	55.0 µm/m-°C	30.6 µin/in-°F	ISO 11359-1/-2
Melting Point	315 °C	599 °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)	280 °C	536 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	160 °C	320 °F	ISO 75-1/-2
Flammability, UL94	V-0	V-0	IEC 60695-11-10
	V-0	V-0	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	

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	33.0 kV/mm	838 kV/in	dry; IEC 60243-1
	33.0 kV/mm	838 kV/in	conditioned; IEC 60243-1

Electrical Properties Comparative Tracking Index	Metric 500 V	English 500 V	Comments continued; IEC 60112
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Descriptive Properties	Value	Comments	
Automotive	Air intake systems		
	Automotive electr. and electronics, lighting		
	Compressed air systems		
	Fuel systems		
	Hydraulic systems		
Electricals & Electronics	Interior		
	Connectors		
	Electrical appliances		
	Electrical equipment		
	Energy distribution		
	Lighting		
Form	Mobile phones and other portable devices		
	Granules		
	Industry & Consumer goods	Hydraulics & Pneumatics	
		Mechanical Engineering	
		Power transmission	
		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		

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