

EMS-Grivory Grivory® XE 5051 (BGZ-40 FC) PA6-GF40

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 40% Glass Fiber Filled

Material Notes:

Product description: Grilon XE 5051 is a impact modified, heat stabilized PA 6 injection molding grade with 40% glass fiber reinforcement.

Grilon XE 5051 has the following important properties: High impact resistanceHigh stiffnessGood flowabilityGood processability

Application examples are structural parts for furniture, power tool housings, ski bindings and functional parts in automotive with critical wall thickness-flow length ratio.Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-XE-5051-BGZ-40-FC-PA6-GF40.php

Physical Properties	Metric	English	Comments
Density	1.43 g/cc	0.0517 lb/in ³	ISO 1183
Water Absorption	5.0 %	5.0 %	ISO 62
Moisture Absorption	1.50 %	1.50 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 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	120 MPa	17400 psi	conditioned; ISO 2039-1
	220 MPa	31900 psi	dry; ISO 2039-1
Tensile Strength at Break	115 MPa	16700 psi	conditioned; ISO 527-1/-2
	170 MPa	24700 psi	dry; ISO 527-1/-2
Elongation at Break	3.5 %	3.5 %	dry; ISO 527-1/-2
	8.0 %	8.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	7.50 GPa	1090 ksi	conditioned; ISO 527-1/-2
	11.0 GPa	1600 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	10.0 J/cm ²	47.6 ft-lb/in ²	dry; ISO 179/1eU
	8.00 J/cm ²	38.1 ft-lb/in ²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	8.50 J/cm ²	40.4 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched			dry; ISO 179/1eA

Mechanical Properties	2.50 J/cm² Metric	11.9 ft-lb/in² English	Comments
	3.50 J/cm²	16.7 ft-lb/in²	conditioned; ISO 179/1eA
	1.50 J/cm²	7.14 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	1.90 J/cm²	9.04 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	60.0 µm/m-°C	33.3 µin/in-°F	ISO 11359-1/-2
Melting Point	222 °C	432 °F	10°C/min; ISO 11357-1/-3
Maximum Service Temperature, Air	90.0 - 120 °C	194 - 248 °F	long term; EMS
	160 °C	320 °F	short term; EMS
Deflection Temperature at 1.8 MPa (264 psi)	205 °C	401 °F	ISO 75-1/-2
Deflection Temperature at 8.0 MPa	120 °C	248 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	dry; IEC 60093
	1.00e+14 ohm-cm	1.00e+14 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Strength	37.0 kV/mm	940 kV/in	conditioned; IEC 60243-1
	41.0 kV/mm	1040 kV/in	dry; IEC 60243-1
Comparative Tracking Index	550 V	550 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Automotive	Automotive electr. and electronics, lighting	
	Powertrain and Chassis	
Electricals & Electronics	Connectors	
	Electrical appliances	

Descriptive Properties	Electrical equipment Value	Comments
Form	Granules	
Industry & Consumer goods	Housewares	
	Mechanical Engineering	
	Sports & Leisure	
	Tools & Accessories	
Processing	Injection Molding	
Product Attributes	Improved flowability and demoulding	
Special Characteristics	High impact or impact modified	

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