

EMS-Grivory Grivory® GTR 45 PA6I/6T

Category : Polymer , Thermoplastic , Nylon , Nylon 6

Material Notes:

Product description: Grivory GTR 45 is a transparent engineering thermoplastic based on amorphous, partially aromatic copolyamide for injection molding. Compared to other semi crystalline polyamides the most interesting property of Grivory GTR 45 is the transparency even at high wall thicknesses. Grivory GTR 45 is suitable for production of optically and technically demanding parts in the application segments: Electro / Electronics Mechanical engineering Domestic appliances Safety technology Packaging Grivory GTR 45 can be used where transparency with solvent resistance is needed and is particularly suitable and approved for parts in contact with non alcoholic food, cosmetics and cold (< 30°C) drinking water. Information provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-GTR-45-PA6I6T.php

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
Water Absorption	7.0 %	7.0 %	ISO 62
Moisture Absorption	2.00 %	2.00 %	ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 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	145 MPa	21000 psi	dry; ISO 2039-1
	145 MPa	21000 psi	conditioned; ISO 2039-1
Tensile Strength, Yield	100 MPa	14500 psi	conditioned; ISO 527-1/-2
	100 MPa	14500 psi	dry; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
	<= 50 %	<= 50 %	dry; ISO 527-1/-2
Elongation at Yield	5.0 %	5.0 %	conditioned; ISO 527-1/-2
	5.0 %	5.0 %	dry; ISO 527-1/-2
Tensile Modulus	3.00 GPa	435 ksi	conditioned; ISO 527-1/-2
	3.00 GPa	435 ksi	dry; ISO 527-1/-2
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

Mechanical Properties	Metric	English	Comments
	0.210 J/cm²	0.015 ft-lb/in²	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
	0.800 J/cm²	3.81 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	60.0 µm/m-°C	33.3 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
Maximum Service Temperature, Air	40.0 - 60.0 °C	104 - 140 °F	long term; EMS
	70.0 °C	158 °F	short term; EMS
Transformation Temperature, Tg	125 °C	257 °F	10°C/min; ISO 11357-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	115 °C	239 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	105 °C	221 °F	ISO 75-1/-2
Flammability, UL94	V-2	V-2	IEC 60695-11-10

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

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+13 ohm	1.00e+13 ohm	IEC 60093
Dielectric Strength	27.0 kV/mm	686 kV/in	dry; IEC 60243-1
	27.0 kV/mm	686 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Automotive	Interior	
Electricals & Electronics	Electrical appliances	
Food contact	EU Requirements	

Descriptive Properties	Value	Comments
Form	Granules	
Industry & Consumer goods	Housewares	
Medical	USP VI	
Packaging	Cosmetics / Personal care	
	Injectionstretchblowmoulded containers	
	Medical packaging	
Processing	Injection (stretch) blow molding	
	Injection Molding	
Product Attributes	Barrier Properties	
	Partially aromatic Polyamide	
Special Characteristics	Transparent	

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