

EMS-Grivory Grivory® TR 90 NZ PAMACM12-I

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

Product description: Grilamid TR grades are transparent thermoplastic polyamides based on aliphatic and cycloaliphatic blocks. Grilamid TR 90 NZ offers a variety of interesting properties such as: outstanding impact resistance even at low temperaturesvery high flexural fatigue strengthgood chemical- and stress-crack resistancehigh UV resistancecan be colored in transparent as well as opaque colors Grilamid TR 90 NZ shows reversible thermotropic transparency. The transparency continuously decreases during heating from room temperature to about 70°C. At 80°C the material is opaque. Grilamid TR 90 NZ is suitable for production of optical and technical demanding parts in the application fields of: OpticsElectroElectronicsAutomotiveMechanical engineeringDomestic appliancesInformation provided by EMS Grivory

Order this product through the following link:

http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-TR-90-NZ-PAMACM12-I.php

Physical Properties	Metric	English	Comments
Density	1.00 g/cc	0.0361 lb/in³	ISO 1183
Water Absorption	3.0 %	3.0 %	ISO 62
Moisture Absorption	1.50 %	1.50 %	ISO 62
Linear Mold Shrinkage, Flow	0.0090 cm/cm	0.0090 in/in	ISO 294-4, 2577
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	ISO 294-4, 2577

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	90.0 MPa	13100 psi	conditioned; ISO 2039-1
Tensile Strength at Break	45.0 MPa	6530 psi	conditioned; ISO 527-1/-2
Tensile Strength, Yield	50.0 MPa	7250 psi	conditioned; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	conditioned; ISO 527-1/-2
Elongation at Yield	7.0 %	7.0 %	conditioned; ISO 527-1/-2
Tensile Modulus	1.30 GPa	189 ksi	conditioned; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	conditioned; ISO 179/1eU
	NB	NB	conditioned; ISO 179/1eU
	@Temperature 30.0 °C	@Temperature 86.0 °F	
Charpy Impact, Notched	2.20 J/cm²	10.5 ft-lb/in²	conditioned; ISO 179/1eA
	1.50 J/cm²	7.14 ft-lb/in²	conditioned; ISO 179/1eU

Mechanical Properties	@Temperature 30.0 °C Metric	@Temperature 86.0 °F English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
Maximum Service Temperature, Air	80.0 - 100 °C	176 - 212 °F	long term; EMS
	120 °C	248 °F	short term; EMS
Transformation Temperature, Tg	155 °C	311 °F	10°C/min; ISO 11357-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	135 °C	275 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	110 °C	230 °F	ISO 75-1/-2

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

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	conditioned; IEC 60093
Surface Resistance	1.00e+12 ohm	1.00e+12 ohm	IEC 60093
Dielectric Strength	34.0 kV/mm	864 kV/in	conditioned; IEC 60243-1
Comparative Tracking Index	600 V	600 V	conditioned; IEC 60112

Descriptive Properties	Value	Comments
Additives	Lubricants	
Automotive	Compressed air systems	
	Exterior	
	Fuel systems	
	Interior	
Electricals & Electronics	Connectors	
	Electrical appliances	
	Electrical equipment	
	Energy distribution	

Descriptive Properties	Value	Comments
	Mobile phones and other portable devices	
Form	Granules	
Industry & Consumer goods	Housewares	
	Hydraulics & Pneumatics	
	Mechanical Engineering	
	Medical devices	
Optics	Spectacle frames	
Processing	Injection Molding	
	Other Extrusion	
Product Attributes	Co Polyamide	
	Hydrolysis resistant	
	Transparent Polyamide	
Special Characteristics	High impact or impact modified	
	Improved UV resistance (outdoor use)	
	Transparent	

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