EMS-Grivory Grivory® TR 90 TL PAMACM12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

Product description: Grilamid TR 90 TL is a transparent thermoplastic polyamide based on aliphatic, cycloaliphatic and aromatic blocks. The special characteristic of Grilamid TR 90 TL is the high stiffness combined with excellent chemical resistance and high transparency. Key features are: Increased stiffnessHigh transparency and glossHigh flexural fatigue strengthHigh chemical and stress crack resistanceGood impact strengthLow density Grilamid TR 90 TL is especially suitable for stable injection moulding applications requiring high flow and good de-moulding properties. Typical application fields are: Spectacle framesMechanical engineeringSanitary applicationsDomestic appliancesAutomotive interiorElectro / ElectronicsInformation provided by EMS Grivory

Order this product through the following link:
http://www.lookpolymers.com/polymer_EMS-Grivory-Grivory-TR-90-TL-PAMACM12.php

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in³	ISO 1183
Water Absorption	2.5 %	2.5 %	ISO 62
Moisture Absorption	2.00 %	2.00 %	ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 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	120 MPa	17400 psi	conditioned; ISO 2039-1
Tensile Strength at Break	55.0 MPa	7980 psi	conditioned; ISO 527-1/-2
Tensile Strength, Yield	75.0 MPa	10900 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	1.85 GPa	268 ksi	conditioned; ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	conditioned; ISO 179/1eU
	NB @Temperature 30.0 °C	NB @Temperature 86.0 °F	conditioned; ISO 179/1eU
Charpy Impact, Notched	1.00 J/cm²	4.76 ft-lb/in²	conditioned; ISO 179/1eA
	1.10 J/cm² @Temperature 30.0 °C	5.23 ft-lb/in² @Temperature 86.0 °F	conditioned; ISO 179/1eU

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	95.0 µm/m-°C	52.8 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	95.0 µm/m-°C	52.8 µin/in-°F	ISO 11359-1/-2
Maximum Service Temperature, Air	80.0 - 100 °C	176 - 212 °F	long term; EMS
	110 °C	230 °F	short term; EMS
Transformation Temperature, Tg	135 °C	275 °F	10°C/min; ISO 11357-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	110 °C	230 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	ISO 75-1/-2
Flammability, UL94	HB	HB	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+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	33.0 kV/mm	838 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	
Electricals & Electronics	Connectors	
	Electrical appliances	
	Electrical equipment	
	Energy distribution	
	Lighting	

Descriptive Properties	Value	Comments
	Mobile phones and other portable devices	
Form	Granules	
Industry & Consumer goods	Housewares	
	Hydraulics & Pneumatics	
	Mechanical Engineering	
	Medical devices	
Processing	Injection Molding	
Product Attributes	Co Polyamide	
	Hydrolysis resistant	
	Transparent Polyamide	
Special Characteristics	High impact or impact modified	

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