LATI LATAMID 12 H FE90 Nylon 12 Base Magnetizable Compound (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

Description: These are compounds containing a high percentage of magnetizable fillers; compared to traditional techniques for the manufacture of magnets, this allows the molding of complex shapes using injection molding. To obtain permanent magnetization values, molded parts must then be submitted to the action of a magnetic field. All magnetizable LATI thermoplastics are 'hard' magnetic materials of the permanent type which will therefore require high demagnetizing power (high Hc). Magnetic values shown in the charts are obtained on molded parts using traditional processing methods; for particular requirements, higher values may be obtained using special techniques. APPLICATIONS: deflection yokes for TV sets, parts for small electric motors, components for meters and video-recorders, permanent magnets for various applications. Specific Notes for this Material: PA 12 base; fair flowability; high contents of magnetizable fillers; high magnetic properties; high rigidity. Disclaimer from LATI: This document contains information based on average values as obtained from the results of laboratory tests and observations made on LATI materials. Tested materials were injection molded, used in their natural color, and conditioned in compliance with Standard ASTM D 618, procedure A. These values refer to LATI's best technical and scientific knowledge at the moment of testing and cannot be used as a basis for the development of applications. For a better assessment of the materials, you are kindly requested to contact LATI's technical or commercial offices, which are at your disposal and will supply detailed information on the most suitable characteristics for their intended use. With reference to DPR n.224 dated May 24, 1988, issued in accordance with EC Guide-lines 85/374, LATI Industria Termoplastici S.p.A. declines all responsibility arising from an improper use of the products described in this document.All data provided by LATI.

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http://www.lookpolymers.com/polymer_LATI-LATAMID-12-H-FE90-Nylon-12-Base-Magnetizable-Compound-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	3.25 g/cc	0.117 lb/in³	ISO 1183
Linear Mold Shrinkage	0.0050 cm/cm	0.0050 in/in	LATI
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	LATI

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	77	77	ASTM D785
Tensile Strength, Ultimate	32.0 MPa	4640 psi	ISO 527
	15.0 MPa @Temperature 120 °C	2180 psi @Temperature 248 °F	ISO 527
	18.0 MPa @Temperature 90.0 °C	2610 psi @Temperature 194 °F	ISO 527
	24.0 MPa	3480 psi	ISO 527

Mechanical Properties	Metric	English	Comments
	@Temperature 60.0 °C	@Temperature 140 °F	
Flexural Modulus	10.5 GPa	1520 ksi	ASTM D790
Izod Impact, Notched	0.320 J/cm @Temperature -40.0 °C	0.599 ft-lb/in @Temperature -40.0 °F	ASTM D256
	0.320 J/cm @Temperature -20.0 °C	0.599 ft-lb/in @Temperature -4.00 °F	ASTM D256
	0.330 J/cm @Temperature 23.0 °C	0.618 ft-lb/in @Temperature 73.4 °F	ASTM D256
Charpy Impact Unnotched	0.800 J/cm² @Temperature -40.0 °C	3.81 ft-lb/in² @Temperature -40.0 °F	DIN 53453
	0.900 J/cm² @Temperature 23.0 °C	4.28 ft-lb/in² @Temperature 73.4 °F	DIN 53453
	0.900 J/cm² @Temperature -20.0 °C	4.28 ft-lb/in² @Temperature -4.00 °F	DIN 53453

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	152 °C	306 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	108 °C	226 °F	ASTM D648
Vicat Softening Point	160 °C	320 °F	50°C/h 50N; ISO 306
Flammability, UL94	HB @Thickness 0.710 mm	HB @Thickness 0.0280 in	

Electrical Properties	Metric	English	Comments
Surface Resistance	0.265 ohm	0.265 ohm	IEC 93
Dielectric Strength	0.200 kV/mm @Thickness 2.00 mm	5.08 kV/in @Thickness 0.0787 in	IEC 243-1
Comparative Tracking Index	188 V	188 V	IEC 112

Processing Properties	Metric	English	Comments
Melt Temperature	240 - 260 °C	464 - 500 °F	
Mold Temperature	60.0 - 80.0 °C	140 - 176 °F	

Processing Properties	Metric	English	Comments
Drying Temperature	80.0 - 90.0 °C	176 - 194 °F	Keep the material always warm in a hopper at 70-80°C. Temperature can be reduced when using vacuum ovens.
Dry Time	>= 3 hour	>= 3 hour	Drying time can be reduced when using vacuum ovens.

Descriptive Properties	Value	Comments
Injection Speed	medium	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com
Email : sales@lookpolymers.com
Tel : +86 021-51131842
Mobile : +86 13061808058
Skype : lookpolymers
Address : United North Road 215,Fengxian District, Shanghai City,China