

LATI LASULF G/20 20% Glass Reinforced Polysulfone (PSU) (Unverified Data**)

Category : Polymer , Thermoplastic , Polysulfone (PSU) , Polysulfone, 20% Glass Fiber Reinforced

Material Notes:

Description: Lasulf products are composed of polysulfone (PSU). They feature good thermal and mechanical properties such as excellent toughness, even at low temperatures, excellent dimensional stability low water absorption and exceptional resistance to hydrolysis allow their application also in case of very hot water. Reinforced Lasulfs are among the few thermoplastics guaranteeing good mechanical properties even at high temperatures. Resistance to creep is excellent, thermal resistance is outstanding: continuous no-load working temperature can reach 160°C (200°C for short periods of time). The Lasulfs are self-extinguishing without adding flame retardants. Specific Notes for this Material: UL94V-0 self-extinguishing, without halogens or phosphorus; low fume optical density and toxicity; 20% glass fiber; good mechanical properties, even at high temperatures; excellent dimensional stability; low coefficient of linear thermal expansion; excellent thermal resistance. 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-LASULF-G20-20-Glass-Reinforced-Polysulfone-PSU-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in ³	ISO 1183
Water Absorption	0.19 %	0.19 %	at 23°C; ISO 62
Linear Mold Shrinkage	0.0035 cm/cm	0.0035 in/in	LATI
Linear Mold Shrinkage, Transverse	0.0035 cm/cm	0.0035 in/in	LATI

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	90	90	ASTM D785
Tensile Strength, Ultimate	108 MPa	15700 psi	ISO 527
	67.0 MPa	9720 psi	ISO 527
	@Temperature 120 °C	@Temperature 248 °F	
	80.0 MPa	11600 psi	ISO 527
	@Temperature 90.0 °C	@Temperature 194 °F	
	91.0 MPa	13200 psi	

Mechanical Properties	Metric @ Temperature 60.0 °C	English @ Temperature 140 °F	ISO 527 Comments
Flexural Modulus	5.90 GPa	856 ksi	ASTM D790
	5.70 GPa @Temperature 120 °C	827 ksi @Temperature 248 °F	ASTM D790
	5.75 GPa @Temperature 90.0 °C	834 ksi @Temperature 194 °F	ASTM D790
	5.85 GPa @Temperature 60.0 °C	848 ksi @Temperature 140 °F	ASTM D790
Izod Impact, Notched	0.750 J/cm @Temperature -40.0 °C	1.41 ft-lb/in @Temperature -40.0 °F	ASTM D256
	0.800 J/cm @Temperature -20.0 °C	1.50 ft-lb/in @Temperature -4.00 °F	ASTM D256
	0.800 J/cm @Temperature 23.0 °C	1.50 ft-lb/in @Temperature 73.4 °F	ASTM D256
Charpy Impact Unnotched	2.50 J/cm ² @Temperature -20.0 °C	11.9 ft-lb/in ² @Temperature -4.00 °F	DIN 53453
	2.50 J/cm ² @Temperature -40.0 °C	11.9 ft-lb/in ² @Temperature -40.0 °F	DIN 53453
	2.50 J/cm ² @Temperature 23.0 °C	11.9 ft-lb/in ² @Temperature 73.4 °F	DIN 53453

Thermal Properties	Metric	English	Comments
CTE, linear	30.0 μm/m-°C @Temperature 20.0 °C	16.7 μin/in-°F @Temperature 68.0 °F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	186 °C	367 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	180 °C	356 °F	ASTM D648
Vicat Softening Point	183 °C	361 °F	50°C/h 50N; ISO 306
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	
Oxygen Index	38 %	38 %	ISO 4589

Thermal Properties	Metric	English	Comments
Glow Wire Test	@Thickness 2.00 mm	@Thickness 0.0787 in	IEC 695-2-1
	960 °C	1760 °F	IEC 695-2-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	18.0 kV/mm	457 kV/in	IEC 243-1
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Comparative Tracking Index	125 V	125 V	IEC 112

Processing Properties	Metric	English	Comments
Melt Temperature	300 - 340 °C	572 - 644 °F	
Mold Temperature	120 - 130 °C	248 - 266 °F	
Drying Temperature	120 - 130 °C	248 - 266 °F	Not necessary for reinforced materials. Temperature can be reduced when using vacuum ovens.
Dry Time	>= 3 hour	>= 3 hour	Not necessary for reinforced materials. Drying time can be reduced when using vacuum ovens.

Descriptive Properties	Value	Comments
Heat Resistance - Ball Test (125°C)	Y	IEC 335
Heat Resistance - Ball Test (165°C)	Y	IEC 335
Injection Speed	high	
Needle Burner Test	Y	1.47 mm
	Y	3.05 mm

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