

LATI LASULF Polysulfone (PSU) (Unverified Data**)

Category : Polymer , Thermoplastic , Polysulfone (PSU)

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: low fume optical density and toxicity; transparent, but slightly colored; low flowability; excellent surface finish.

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.

Order this product through the following link:

http://www.lookpolymers.com/polymer_LATI-LASULF-Polysulfone-PSU-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Water Absorption	0.22 %	0.22 %	at 23°C; ISO 62
Linear Mold Shrinkage	0.0070 cm/cm	0.0070 in/in	LATI
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	LATI

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	69	69	ASTM D785
Tensile Strength, Ultimate	69.0 MPa	10000 psi	ISO 527
	37.0 MPa	5370 psi	ISO 527
	@Temperature 120 °C	@Temperature 248 °F	
	49.0 MPa	7110 psi	ISO 527
	@Temperature 90.0 °C	@Temperature 194 °F	
	56.0 MPa	8120 psi	ISO 527
	@Temperature 60.0 °C	@Temperature 140 °F	

Mechanical Properties	Metric	English	Comments
	2.30 GPa	334 ksi	ASTM D790
	@Temperature 120 °C	@Temperature 248 °F	
	2.40 GPa	348 ksi	ASTM D790
	@Temperature 90.0 °C	@Temperature 194 °F	
	2.45 GPa	355 ksi	ASTM D790
	@Temperature 60.0 °C	@Temperature 140 °F	
Izod Impact, Notched	0.650 J/cm	1.22 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	0.750 J/cm	1.41 ft-lb/in	ASTM D256
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	0.750 J/cm	1.41 ft-lb/in	ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	>= 30.0 J/cm ²	>= 143 ft-lb/in ²	DIN 53453
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	>= 30.0 J/cm ²	>= 143 ft-lb/in ²	DIN 53453
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	>= 30.0 J/cm ²	>= 143 ft-lb/in ²	DIN 53453
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	60.0 μm/m-°C	33.3 μin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	181 °C	358 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	163 °C	325 °F	ASTM D648
Vicat Softening Point	180 °C	356 °F	50°C/h 50N; ISO 306
Flammability, UL94	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	33 %	33 %	ISO 4589
	960 °C	1760 °F	

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

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

Electrical Properties	Metric	English	Comments
Dielectric Strength	17.0 kV/mm @Thickness 2.00 mm	432 kV/in @Thickness 0.0787 in	IEC 243-1
Comparative Tracking Index	150 V	150 V	IEC 112

Processing Properties	Metric	English	Comments
Melt Temperature	290 - 310 °C	554 - 590 °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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