



# LASULF

Based on PSU (Polysulphone)

## Key benefits:

- **Good mechanical properties**
- **High continuous use temperature**
- **Excellent dimensional stability**
- **Outstanding hydrolysis resistance**
- **Suitable for contact with food and potable water**
- **Very good resistance to fungus**
- **Good chemical resistance**
- **Inherently self-extinguishing**
- **Transparent amber colour (base resin)**
- **Wide colour range**

LASULF is a high-performance amorphous engineering thermoplastic resin characterised by the sulphone group.

LASULF is a yellowish, transparent material, which shows interesting characteristics such as high strength, high HDT (heat distortion temperature), high long term CUT (continuous use temperature) and low creep.

Further, low water absorption and exceptional resistance to hydrolysis allow its application also in the presence of very hot water.

It has a very high resistance to mineral acids, alkali, and salt solutions, as well as to detergents and hydrocarbon oils. It is good, even at elevated temperatures under moderate stress levels. However, it is not resistant to polar organic solvents such as ketones, chlorinated hydrocarbons and aromatic hydrocarbons.

It can also be sterilised in different ways (in autoclaves, with ethylene oxide or by gamma-rays).

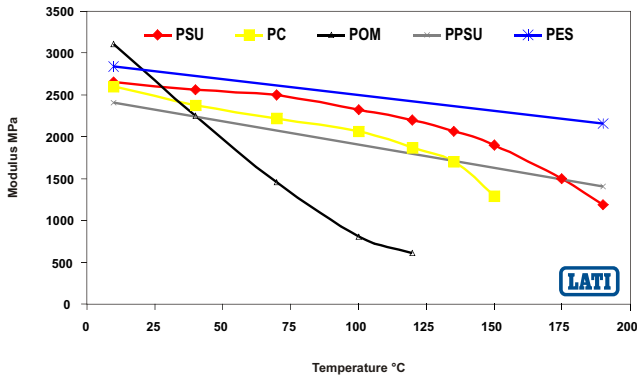
LASULF is available in unfilled, glass-reinforced and self-lubricating versions. It is self extinguishing without the need to add flame retardants.

LATI is willing to share with you its expertise in this field, and its T.S. and R&D Teams are at your complete disposal to analyse your requirements and collaborate on project developments.

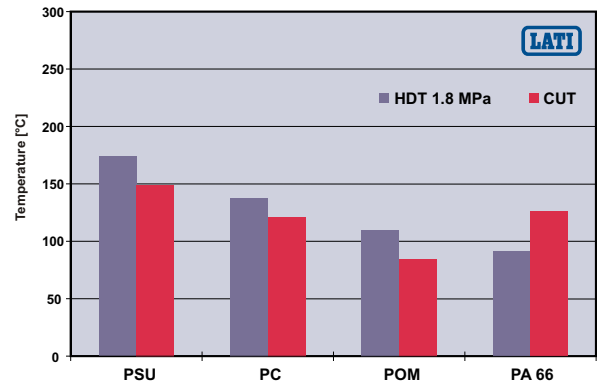
## PROPERTIES of LASULF (typical values)

	Test r/Method	Units	Unfilled	Glass fibre reinforced		Self-Lubricating Products	
			LASULF	LASULF G/20	LASULF G/30	LATILUB 95-20T	LATILUB 95-20T G/20
<b>General</b>							
Density	ISO 1183	g/cm <sup>3</sup>	1.24	1.38	1.45	1.35	1.48
Shrinkage - along flow	LATI	%	0.70	0.40	0.30	0.60	0.35
Shrinkage - across flow	LATI	%	0.70	0.40	0.30	0.60	0.35
<b>Mechanical</b>							
Tensile strength at yield	ISO 527	MPa	70	108	130	50	80
Elongation at break	ISO 527	%	75	2.5	2	8	1.8
Flexural strength at yield	ISO 178	MPa	103	147	165	90	100
Flexural modulus	ISO 178	MPa	2600	5900	8300	2300	5400
Notched Izod	ASTM D256	J/m	75	80	100	60	74
<b>Electrical</b>							
Dielectric strength	ASTM D149	KV/mm	17	18	18	17	18
Comparative tracking index	IEC 112	V	150	125	125	150	150
<b>Thermal</b>							
HDT at 1.82 MPa	ISO 75	°C	170	180	180	168	177
Continuous use temperature	UL746B	°C	150	160	160	150	160
<b>Flammability</b>							
Rating @ 1.5 mm thickness	UL-94	-	V-1	V-0	V-0	V-0	V-0

### Flexural Modulus vs. Temperature (base polymers)



### Base Polymers



### Sterilisation Resistance

Resin	Cycles to Craze	Cycles to Rupture
PSU	80	150
Autoclave Conditions:	0.18 MPa steam 132°C Steam contains 50 ppm Morpholine	
Test Conditions:	Bar: 127 x 13 x 3 mm Flexural Stress - 6.9 MPa	

### Hydrolysis and Chemical Resistance

Reagents	PSU
Hydrocarbons	G
Aromatic solvents	S
Oxygenated solvents	S
Chlorinated hydrocarbons	S
Acids	E
Bases	E

Resistance: E= Excellent; G= Good; F= Fair; S= Severe attack

## Industry Sectors:

- Automotive
- Household appliances
- Industrial
- Medical
- Plumbing
- Others



Arm or leg electrode  
(for electrocardiogram)  
in LASULF



Humidifying chamber  
in LASULF

**Note: should you be interested in receiving a more detailed brochure, just contact our Offices**

This document contains information based on average values as obtained from the results of laboratory tests and observations made on our materials. Tested materials were injection moulded, used in their natural colour, and conditioned in compliance with Standard ASTM D 618, procedure A (40 h - 23°C - 50%R.H.). These data refer to our 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 our technical or commercial offices, which are at your disposal and will supply detailed information on the most suitable characteristics for the 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.