



LARPEEK

Based on PEEK (PolyEtherEtherKetone)

Key benefits:

- **High thermal resistance**
- **Good mechanical and dielectric properties**
- **Excellent tribological behaviour**
- **Excellent flammability and low levels of smoke toxicity during combustion;**
- **Exceptional chemical and hydrolysis resistance**
- **Resistance to ionising radiation**
- **Resistance to several sterilisation techniques**

LARPEEK offers an alternative to design engineers intending to make use of a thermoplastic material for the realisation of parts where higher performance under extreme working conditions is needed.

The properties of LARPEEK, combined with the ease of processing and machining, can offer significant cost reductions in the realisation of parts traditionally made with other materials such as stainless steel, light alloy, ceramics, glass...

In addition to the unfilled versions, LARPEEK is also available with different levels of glass and / or carbon-fibre reinforcement. There are additional self-lubricating grades and, further, tailor-made grades to meet specific project requirements.

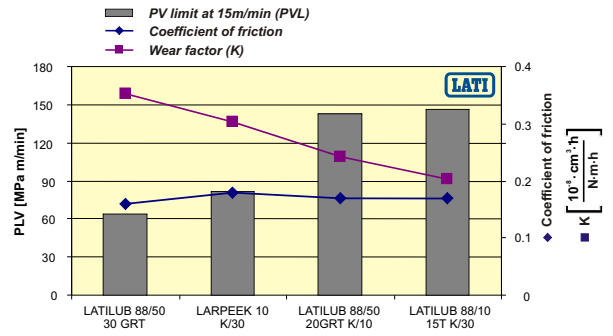
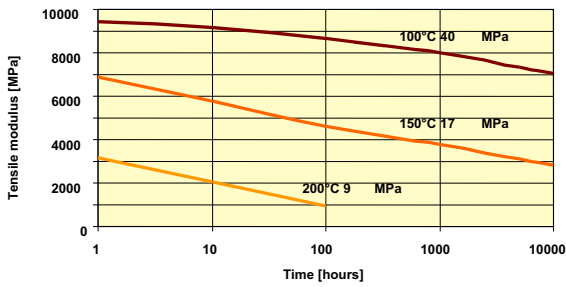
It is also worth remembering that LARPEEK can be easily processed by using conventional thermoplastic injection moulding machines and electrically heated moulds. Due to its versatility, LARPEEK can also be processed by extrusion, compression and sintering. It can be used for cable coating, metal-deposition, as a functional additive for PTFE, films and so forth.

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.

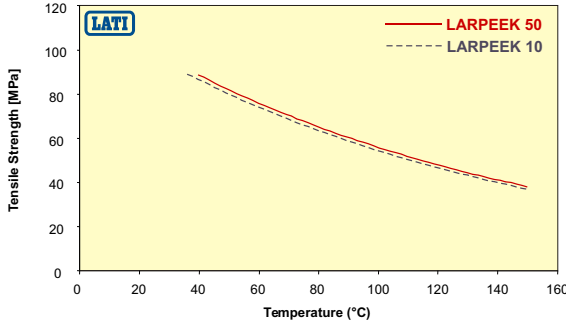
PROPERTIES OF LARPEEK (typical values)

	Test Method	Units	Unfilled	Glass fibre reinforced	Carbon fibre reinforced	Self-Lubricating Products (High tribological performance)	
			LARPEEK 50	LARPEEK 50 G/30	LARPEEK 50 K/30	LATILUB 88/50-20GRT K/10	LATILUB 88/10-15T K30
General							
Specific gravity	ISO 118	g/cm ³	1.29	1.50	1.40	1.43	1.47
Shrinkage - along flow	LATI	%	0.80	0.40	0.20	0.50	0.30
Shrinkage - across flow	LATI	%	1.20	1.00	1.00	1.10	0.90
Mechanical							
Tensile Strength	ISO 527	MPa	95	180	220	145	185
Tensile Modulus	ISO 527	MPa	4200	11500	20000	15000	21500
Tensile Elongation	ISO 527	%	>30	2.5	1.8	2.0	1.2
Izod Impact Strength (Notched)	ASTM D256	J/m	70	100	65	64	60
Electrical							
Volume Resistivity	IEC 93	Ohm.cm	> 10 ¹⁵	> 10 ¹⁵	10 ³	10 ⁸	>10 ³
Surface Resistivity	IEC 93	Ohm	>10 ¹⁴	>10 ¹⁴	10 ²	10 ⁶	>10 ²
Thermal							
HDT at 1.82 MPa	ISO 75	°C	155	294	>300	290	>300
Melting Point	DSC	°C	341	341	341	341	341
Continuous Use Temperature	UL746B	°C	260	260	260	260	260
Flammability							
Rating @ 1.6 mm thickness	UL-94	-	V-0	V-0	V-0	V-0	V0

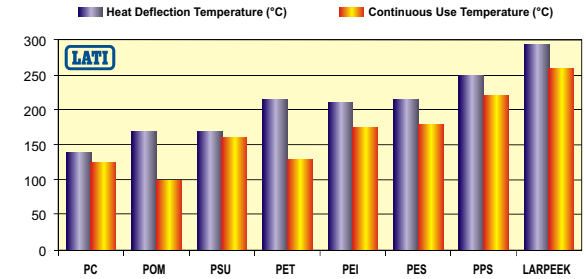
LATI Creep modulus - LARPEEK 30% Glass Fibre



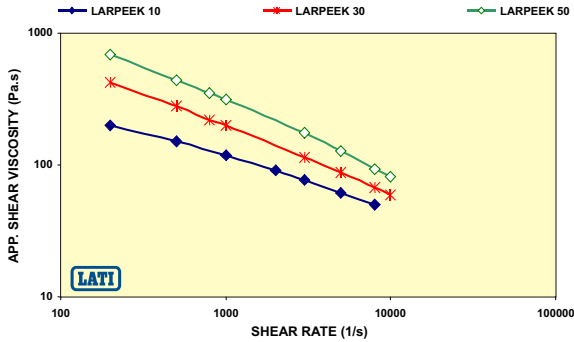
Tensile Strength versus Temperature



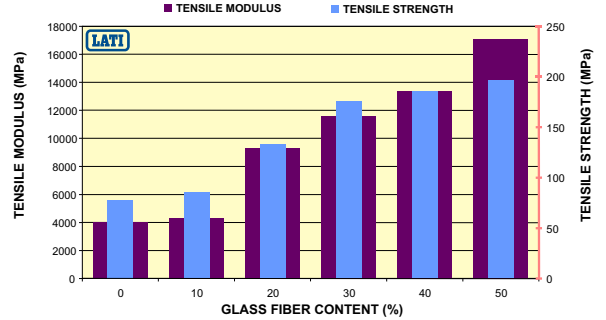
Temperature Resistance of LARPEEK glass reinforced



Rheological Curves (400°C)

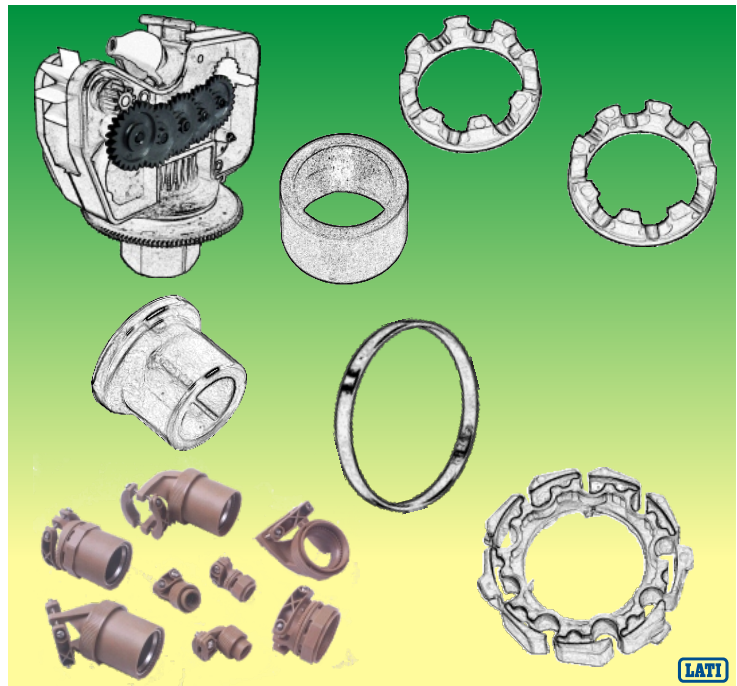


LARPEEK



Industry Sectors:

- Aerospace
- Building
- Domestic appliances
- Electrical / Electronic
- Industrial
- Medical
- Military
- Leisure
- Transport
- ...



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.