LATI LARIL 13-V1 Polyphenylene Oxide (PPOm) (UL94V-1) (discontinued **)

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO , Polyphenylene Ether, Molded

Material Notes:

Description: Laril thermoplastics are polyphenylene oxide (PPOm) products. They exhibit excellent toughness, even at low temperatures, good thermal resistance and dimensional stability are the most important properties featured by the Larils which can therefore be used within a wide range of temperatures (-40°C / +110°C). The Larils feature exceptional resistance to hydrolysis and are therefore applicable also in contact with very hot water. Specific Notes for this Material: UL94V-1 self-extinguishing, without halogens or red phosphorus; good impact strength also at low temperatures. 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-LARIL-13-V1-Polyphenylene-Oxide-PPOm-UL94V-1-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.08 g/cc	0.0390 lb/in³	ISO 1183
Water Absorption	0.060 %	0.060 %	at 23°C; ISO 62
Linear Mold Shrinkage	0.0055 cm/cm	0.0055 in/in	LATI
Linear Mold Shrinkage, Transverse	0.0055 cm/cm	0.0055 in/in	LATI

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	82	82	ASTM D785
Tensile Strength, Ultimate	67.0 MPa	9720 psi	ISO 527
	20.0 MPa @Temperature 120 °C	2900 psi @Temperature 248 °F	ISO 527
	34.0 MPa @Temperature 90.0 °C	4930 psi @Temperature 194 °F	ISO 527
	46.0 MPa @Temperature 60.0 °C	6670 psi @Temperature 140 °F	ISO 527
Flexural Modulus	2.65 GPa	384 ksi	ASTM D790

Mechanical Properties	Metric	English	Comments
	2.20 GPa @Temperature 120 °C	319 ksi @Temperature 248 °F	ASTM D790
	2.40 GPa @Temperature 90.0 °C	348 ksi @Temperature 194 °F	ASTM D790
	2.50 GPa @Temperature 60.0 °C	363 ksi @Temperature 140 °F	ASTM D790
Izod Impact, Notched	1.50 J/cm @Temperature -40.0 °C	2.81 ft-lb/in @Temperature -40.0 °F	ASTM D256
	1.90 J/cm @Temperature -20.0 °C	3.56 ft-lb/in @Temperature -4.00 °F	ASTM D256
	2.10 J/cm @Temperature 23.0 °C	3.93 ft-lb/in @Temperature 73.4 °F	ASTM D256
Charpy Impact Unnotched	>= 30.0 J/cm² @Temperature -20.0 °C	>= 143 ft-lb/in² @Temperature -4.00 °F	DIN 53453
	>= 30.0 J/cm² @Temperature -40.0 °C	>= 143 ft-lb/in² @Temperature -40.0 °F	DIN 53453
	>= 30.0 J/cm² @Temperature 23.0 °C	>= 143 ft-lb/in² @Temperature 73.4 °F	DIN 53453

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 µm/m-°C @Temperature 20.0 °C	38.9 µin/in-°F @Temperature 68.0 °F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	125 °C	257 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	115 °C	239 °F	ASTM D648
Vicat Softening Point	128 °C	262 °F	50°C/h 50N; ISO 306
Flammability, UL94	V-1 @Thickness 1.50 mm	V-1 @Thickness 0.0591 in	
Oxygen Index	30 %	30 %	ISO 4589
Glow Wire Test	850 °C @Thickness 2.00 mm	1560 °F @Thickness 0.0787 in	IEC 695-2-1

Thermal Properties	Metric	English	Comments
	850 °C @Thickness 1.00 mm	1560 °F @Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Dielectric Strength	22.0 kV/mm @Thickness 2.00 mm	559 kV/in @Thickness 0.0787 in	IEC 243-1
Comparative Tracking Index	400 V	400 V	IEC 112

Processing Properties	Metric	English	Comments
Melt Temperature	260 - 280 °C	500 - 536 °F	
Mold Temperature	80.0 - 100 °C	176 - 212 °F	
Drying Temperature	100 - 110 °C	212 - 230 °F	Requested for non-reinforced self-extinguishing types. Temperature can be reduced when using vacuum ovens.
Dry Time	>= 3 hour	>= 3 hour	Requested for non-reinforced self-extinguishing types. 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)	N	IEC 335
Injection Speed	medium	
Needle Burner Test	Y	1.47 mm
	Y	3.05 mm

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