

## LATILUB 75/4-05T G/30-V0

Self-lubricating product based on Polybutylene Terephthalate (PBT).

PTFE. Glass fibers. UL94 V-0 classified, with brominated flame retardants, PBB/PBDE and antimony trioxide free.

PHYSICAL PROPERTIES	STANDARD	VALUE MEASURE UNITS
Density	ISO 1183	1.64 g/cm <sup>3</sup>
Linear shrinkage at moulding		
Longitudinal (0.078in/8,700psi)	ISO 294-4	0.004 ÷ 0.007 in/in
Transversal (0.078in/8,700psi)	ISO 294-4	0.004 ÷ 0.007 in/in
MECHANICAL PROPERTIES	STANDARD	VALUE MEASURE UNITS
CHARPY impact strength		
Unnotched, at +73°F	ISO 179-1eU	18.69 ft.lb/in <sup>2</sup>
Notched, at +73°F	ISO 179-1eA	3.74 ft.lb/in <sup>2</sup>
Tensile elongation		
At break (0.196 in/min), 73°F	ISO 527 (1)	2.8 %
Tensile strength		
At break (0.196 in/min), 73°F	ISO 527 (1)	16000 psi
Elastic modulus		
Tensile (speed 0.04 in/min), at 73°F	ISO 527 (1)	1410 kpsi



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THERMAL PROPERTIES	STANDARD	VALUE MEASURE UNITS
<b>VICAT - Softening point</b>		
11 lb (heating rate 122°F/h)	ISO 306	401 °F
<b>HDT - Heat Deflection Temperature</b>		
66 psi	ISO 75	428 °F
264 psi	ISO 75	392 °F
FLAMMABILITY	STANDARD	VALUE MEASURE UNITS
<b>Oxygen Index</b>	ASTM D 2863	28 %
<b>Flammability rating</b>		
0.118 in thickness	UL 94	V-0
0.059 in thickness	UL 94	V-0
0.029 in thickness	UL 94	V-0
<b>GWFI - Glow Wire Flammability Index</b>		
	IEC 60695-2-12	960°C/2mm
<b>GWIT - Glow Wire Ignition Test</b>		
	IEC 60695-2-13	725°C/1mm
	IEC 60695-2-13	725°C/2mm
ELECTRICAL PROPERTIES	STANDARD	VALUE MEASURE UNITS
<b>CTI - Comparative Tracking Index</b>		
solution A (without surfactant)	IEC 60112	250 V
<b>Electrical resistivity</b>		
Surface	ASTM D 257	1E12 ohm
TRIBOLOGICAL PROPERTIES	STANDARD	VALUE MEASURE UNITS
<b>Wear Factor</b>	ASTM D 3702	22 10 <sup>-7</sup> mm <sup>3</sup> /(Nm)
<b>Friction Coefficient</b>		
static	ASTM D 1894	0.22
dynamic	ASTM D 1894	0.18

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### MATERIAL - STORAGE

Sealed, undamaged packages has to be kept in dry storage facilities, providing they are also able to protect them from weather and accidental damages.

### HANDLING AND SAFETY

Detailed information about a safe treatment of the material are indicated in the "Material Safety Data Sheet" (MSDS) furnished with the first material supply. The MSDS may be also sent again in case of loss.

### PREDRYING CONDITIONS

At least 3 hours at 212 ÷ 248°F

These are the suggested conditions to reduce the moisture content to adequate levels. Temperature and drying time can be reduced by using vacuum ovens

### ACTUAL MELT TEMPERATURE

464 ÷ 482°F

The injection molding machine settings needed to obtain the suggested melt temperature will depend greatly on shot size and machine capacity, as well as other molding parameters such as: injection speed, screw RPM, back pressure, etc. On small machines, running short cycles, it is possible to use higher melt temperatures to improve plastification, fluidity and surface appearance, paying attention to any indication of material degradation.

### MOLD TEMPERATURE

158 ÷ 194°F

The mold temperature suggested above is the actual tool steel temperature. This can be significantly different from the tool settings, due to the cooling system efficiency and the accuracy of the temperature control on the tool.

### INJECTION SPEED

Medium

The advisable injection speed greatly depends on cavity geometry and injection molding machine size. The use of high injection speed can improve the surface appearance, but it can also cause outgassing and burn marks due to overheating through shear stress.

### REGRIND USAGE

The use of regrind is possible, but should be assessed on the basis of the project, moulding parameters, and type of grinding used. The effect of using regrind on material properties must be evaluated by the customer on its specific project and process. High percentages of regrind may cause a reduction in viscosity and fibre length, reducing mechanical properties, first resilience. According to UL guideline, up to 25% of regrind is permitted, without affecting the ratings of the yellow card. However, LATI suggests that no more of 15% of regrind is used.

### HOT RUNNER MOLDS

Hot runner moulds may be used when a very tight temperature control is assured.

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### TO AVOID

Shut-off nozzles and internally heated hot runners have to be avoided. In order to prevent any material degradation, over-dimensioned machines should be avoided.

### NOTES

**The products mentioned herein are not suitable for applications in contact with foodstuff or for potable water transportation, or for toy manufacturing. The products mentioned herein are not suitable for applications in the pharmaceutical, medical or dental sector.**

### APPROVALS

USA (UL): Product versions approved according UL recommendations are available.

### CONTACTS

**LATI Industria Termoplastici S.p.A.**