LATI HIGH PERFORMANCE THERMOPLASTICS

LATAMID 66 H2 G/25-V0KB1

Compound based on Polyamide 66 (PA 66).
Heat stabilised. Glass fibres. UL94 V-0 classified, with red phosphorous. Product UL certified.

PHYSICAL PROPERTIES - Typical values	STANDARD	VALUE	MEASURE UNITS
Density	ISO 1183	1.32	g/cm³
Linear shrinkage at moulding - 2.0 mm thickness (at 60 MPa of cavity pressure)			
Longitudinal	ISO 294-4	0.35 ÷ 0.50	%
Transversal	ISO 294-4	0.95 ÷ 1.20	%
MECHANICAL PROPERTIES - Typical values			
IZOD impact strength (sample 63.5x12.7x3.2 mm)			
Notched, at +23°C	ASTM D256-A	80	J/m
CHARPY impact strength (sample 80x10x4 mm)			
Unnotched, at +23°C	ISO 179-1eU	55	kJ/m²
Notched, at +23°C	ISO 179-1eA	8	kJ/m²
Tensile elongation (speed 5 mm/min)			
At break, 23°C	ISO 527 (1)	2.5	%
Tensile strength (speed 5 mm/min)			
At break, 23°C	ISO 527 (1)	125	MPa
Elastic modulus			
Tensile (speed 1 mm/min), at 23°C	ISO 527 (1)	9300	MPa

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THERMAL PROPERTIES - Typical values	STANDARD	VALUE	MEASURE UNITS
Coefficient of linear thermal expansion (CLTE)			
+30°C to +100°C (longitudinal)	ASTM D 696	10	µm/(m·°C)
VICAT - Softening point			
9.8 N (heating rate 50°C/h)	ISO 306	235	°C
HDT - Heat Deflection Temperature			
0.45 MN/m²	ISO 75	260	°C
1.81 MN/m²	ISO 75	235	°C
C.U.T. - Continuous Use Temperature (20,000h)	---	125	°C
FLAMMABILITY - Typical values			
Oxygen Index	ASTM D 2863	27	%
Flammability rating			
3.00 mm thickness	UL 94	V-0 rating	
1.50 mm thickness	UL 94	V-0 rating	
0.75 mm thickness	UL 94	HB rating	
GWFI - Glow Wire Flammability Index			
	IEC 695-2-12	GWFI: 960/1.0mm	
	IEC 695-2-12	GWFI: 960/2.0mm	
GWIT - Glow Wire Ignition Test			
	IEC 695-2-13	GWIT: 750/1.0mm	
	IEC 695-2-13	GWIT: 750/2.0mm	
ELECTRICAL PROPERTIES - Typical values			
CTI - Comparative Tracking Index			
solution A (without surfactant)	IEC 112	400	V

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PREDRYING CONDITIONS — At least 3 hours at 90 ÷ 100°C

These are the suggested conditions to reduce the moisture content to adequate levels. Temperature and drying time are reduced when using vacuum ovens. A particularly wet material may need longer drying time.

ACTUAL MELT TEMPERATURE — 270 ÷ 290°C

The injection 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.

MOULD TEMPERATURE — 70 ÷ 100°C

The mold temperature suggested above is the actual 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 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. The effect of using regrind on material properties must be evaluated by the customer on its specific project and process. High percentages of regrind can cause a reduction in viscosity and fibre length, reducing mechanical properties, reducing mechanical properties

HOT RUNNER MOULDS

Hot runner moulds are not recommended, but can be used when a very tight temperature control is assured and the cycle time is short.

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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.
The product mentioned herein must not be used to produce parts operating in hot (>70°C), very humid environments, or in contact with hot water, or in contact with overheated steam.

CONTACTS

LATI Industria Termoplastici S.p.A.