

LATER 4 G/30-V0

Compound based on Polybutylene Terephthalate (PBT).

Glass fibres. UL94 V-0 classified, with halogens, PBB/PBDE free. Product UL certified.

PHYSICAL PROPERTIES - Typical values	STANDARD	VALUE MEASURE UNITS
Density	ISO 1183	1.58 g/cm ³
Linear shrinkage at moulding - 0.078 in thickness (at 8,700 psi of cavity pressure)		
Longitudinal	ISO 294-4	0.004 ÷ 0.006 in/in
Transversal	ISO 294-4	0.009 ÷ 0.013 in/in
MECHANICAL PROPERTIES - Typical values		
IZOD impact strength (sample 2.5x0.5x0.125 in)		
Notched, at +73°F	ASTM D256-A	1.80 ft.lb/in
CHARPY impact strength (sample 3.149x0.393x0.157 in)		
Unnotched, at +73°F	ISO 179-1eU	21.03 ft.lb/in ²
Unnotched, at -4°F	ISO 179-1eU	23.36 ft.lb/in ²
Notched, at +73°F	ISO 179-1eA	3.27 ft.lb/in ²
Notched, at -4°F	ISO 179-1eA	2.80 ft.lb/in ²
Tensile elongation (speed 0.196 in/min)		
At break, 73°F	ISO 527 (1)	2.5 %
At break, 140°F	ISO 527 (1)	3.5 %
At break, 195°F	ISO 527 (1)	6 %
At break, 250°F	ISO 527 (1)	6 %
At break, 300°F	ISO 527 (1)	6 %
Tensile strength (speed 0.196 in/min)		
At break, 73°F	ISO 527 (1)	17,400 psi
At break, 140°F	ISO 527 (1)	12,300 psi
At break, 195°F	ISO 527 (1)	9,400 psi
At break, 250°F	ISO 527 (1)	7,300 psi
At break, 300°F	ISO 527 (1)	5,800 psi
Elastic modulus		
Tensile (speed 0.04 in/min), at 73°F	ISO 527 (1)	1,523 kpsi
Tensile (speed 0.04 in/min), at 140°F	ISO 527 (1)	1,073 kpsi
Tensile (speed 0.04 in/min), at 195°F	ISO 527 (1)	711 kpsi
Tensile (speed 0.04 in/min), at 250°F	ISO 527 (1)	522 kpsi
Tensile (speed 0.04 in/min), at 300°F	ISO 527 (1)	377 kpsi

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THERMAL PROPERTIES - Typical values	STANDARD	VALUE	MEASURE UNITS
Coefficient of linear thermal expansion (CLTE)			
+86°C to +212°F (longitudinal)	ASTM D 696	8	µin/(in·°F)
VICAT - Softening point			
2,2 lb (heating rate 11°F/h)	ISO 306	392	°F
HDT - Heat Deflection Temperature			
66 psi	ISO 75	428	°F
264 psi	ISO 75	374	°F
C.U.T. - Continuous Use Temperature (20,000h)	---	275	°F
FLAMMABILITY - Typical values			
Oxygen Index	ASTM D 2863	28	%
Flammability rating			
0.118 in thickness	UL 94	V-0 rating	
0.059 in thickness	UL 94	V-0 rating	
GWFI - Glow Wire Flammability Index			
	IEC 695-2-12	GWFI: 960/1.0mm	
	IEC 695-2-12	GWFI: 960/2.0mm	
ELECTRICAL PROPERTIES - Typical values			
CTI - Comparative Tracking Index			
solution A (without surfactant)	IEC 112	250 V	

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PREDRYING CONDITIONS

At least 3 hours at 210 ÷ 250°F

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

465 ÷ 480°F

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.

MOLD TEMPERATURE

160 ÷ 195°F

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.

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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.

CONTACTS

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