LATI HIGH PERFORMANCE THERMOPLASTICS

KELON B H CET/30

Compound based on Polyamide 6 (PA 6).
Heat stabilised. Mineral filler. Product UL certified.
Very high dimensional stability. Good elongation.

PHYSICAL PROPERTIES - Typical values	STANDARD	VALUE	MEASURE UNITS
Density	ISO 1183	1.38	g/cm³
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	0.004 ÷ 0.007	in/in
MECHANICAL PROPERTIES - Typical values			
IZOD impact strength (sample 2.5x0.5x0.125 in)			
Notched, at +73°F	ASTM D 256-A	0.63	ft.lb/in
CHARPY impact strength (sample 3.149x0.393x0.157 in)			
Unnotched, at +73°F	ISO 179-1eU	16.36	ft.lb/in²
Notched, at +73°F	ISO 179-1eA	1.40	ft.lb/in²
Tensile elongation (speed 0.196 in/min)			
At break, 73°F	ISO 527 (1)	2.5	%
At break, 140°F	ISO 527 (1)	3.8	%
At break, 195°F	ISO 527 (1)	9	%
At break, 250°F	ISO 527 (1)	18	%
At break, 300°F	ISO 527 (1)	30	%
Tensile strength (speed 0.196 in/min)			
At break, 73°F	ISO 527 (1)	10,200	psi
At break, 140°F	ISO 527 (1)	8,000	psi
At break, 195°F	ISO 527 (1)	4,400	psi
At break, 250°F	ISO 527 (1)	3,200	psi
At break, 300°F	ISO 527 (1)	2,900	psi
Elastic modulus			
Tensile (speed 0.04 in/min), at 73°F	ISO 527 (1)	942	kpsi
Tensile (speed 0.04 in/min), at 140°F	ISO 527 (1)	609	kpsi
Tensile (speed 0.04 in/min), at 195°F	ISO 527 (1)	319	kpsi
Tensile (speed 0.04 in/min), at 250°F	ISO 527 (1)	246	kpsi
Tensile (speed 0.04 in/min), at 300°F	ISO 527 (1)	217	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	16	µin/(in·°F)
VICAT - Softening point			
11 lb (heating rate 11°F/h)	ISO 306	392	°F
HDT - Heat Deflection Temperature			
66 psi	ISO 75	410	°F
264 psi	ISO 75	311	°F
C.U.T. - Continuous Use Temperature (20,000h)	---	257	°F
FLAMMABILITY - Typical values			
Flammability rating			
0.118 in thickness	UL 94	HB rating	
0.059 in thickness	UL 94	HB rating	
0.029 in thickness	UL 94	HB rating	

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PREDRYING CONDITIONS	At least 3 hours at 195 ÷ 210°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 ÷ 555°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	175 ÷ 210°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, reducing mechanical properties, reducing mechanical properties

HOT RUNNER MOULDS

Hot runner moulds can 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.

CONTACTS

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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.