

SABIC Innovative Plastics LNP LUBRICOMP KL004L Acetal Copolymer

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, Unreinforced

Material Notes:

LNP* LUBRICOMP* KL004L is a compound based on Acetal Copolymer resin containing 20% PTFE. Added features of this material include:

Wear Resistant, Low Extractible.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-KL004L-Acetal-Copolymer.php

Physical Properties	Metric	English	Comments
Density	1.51 g/cc	0.0546 lb/in ³	ISO 1183
	1.52 g/cc	0.0549 lb/in ³	ASTM D792
Moisture Absorption	0.100 %	0.100 %	50% RH, 24 hrs; ASTM D570
Linear Mold Shrinkage, Flow	0.0197 - 0.025 cm/cm	0.0197 - 0.025 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0197 - 0.025 cm/cm	0.0197 - 0.025 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0197 - 0.025 cm/cm	0.0197 - 0.025 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0197 - 0.025 cm/cm	0.0197 - 0.025 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	46.0 MPa	6670 psi	ASTM D638
	47.0 MPa	6820 psi	ISO 527
Tensile Strength, Yield	47.0 MPa	6820 psi	ASTM D638
	48.0 MPa	6960 psi	ISO 527
Elongation at Break	20.3 %	20.3 %	ISO 527
	22.3 %	22.3 %	ASTM D638
Elongation at Yield	10.8 %	10.8 %	ISO 527
	11.3 %	11.3 %	ASTM D638
Tensile Modulus	2.34 GPa	339 ksi	1 mm/min; ISO 527

Mechanical Properties	2.75 GPa Metric	399 ksi English	50 mm/min; ASTM D638 Comments
Flexural Strength	59.0 MPa	8560 psi	ISO 178
Flexural Modulus	2.06 GPa	299 ksi	ASTM D790
	2.10 GPa	305 ksi	ISO 178
Izod Impact, Notched	0.420 J/cm	0.787 ft-lb/in	ASTM D256
Izod Impact, Unnotched	6.72 J/cm	12.6 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	38.0 kJ/m ²	18.1 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	4.00 J	2.95 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	1.00 J	0.738 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.24	0.24	ASTM D3702 Modified
Coefficient of Friction, Static	0.13	0.13	ASTM D3702 Modified
K (wear) Factor	20.1 x 10 ⁻⁸ mm ³ /N-M	10.0 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr	Washer; ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	117 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	65.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	117 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	65.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	115 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	115 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	146 $\text{Å}^\circ\text{C}$	295 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	153 $\text{Å}^\circ\text{C}$	307 $\text{Å}^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	83.0 $\text{Å}^\circ\text{C}$	181 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af

Thermal Properties	Metric	English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648

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