

SABIC Innovative Plastics LNP LUBRICOMP KL004L Acetal Copoly (Asia Pacific)

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

Material Notes:

LNP* Lubricomp* KL004L is a compound based on Acetal Copolymer resin containing PTFE. Added features of this material include:
Internally Lubricated, Low Extractible.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-KL004L-Acetal-Copoly-Asia-Pacific.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	0.034 cm/cm	0.034 in/in	SABIC Method
	0.025 - 0.040 cm/cm	0.025 - 0.040 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.034 cm/cm	0.034 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.025 cm/cm	0.025 in/in	SABIC Method
	0.025 cm/cm	0.025 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.020 - 0.040 cm/cm	0.020 - 0.040 in/in	ASTM D955
	@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	Type I, 5 mm/min; ASTM D638
	47.0 MPa	6820 psi	ISO 527
Tensile Strength, Yield	47.0 MPa	6820 psi	5 mm/min; ISO 527
	47.0 MPa	6820 psi	ASTM D638
Tensile Strength, Yield	47.0 MPa	6820 psi	Type I, 5 mm/min; ASTM D638
	48.0 MPa	6960 psi	ISO 527

Mechanical Properties	Metric 48.0 MPa	English 6900 psi	Comments 5 mm/min; ISO 527
Elongation at Break	20.3 %	20.3 %	ISO 527
	20.4 %	20.4 %	5 mm/min; ISO 527
	22.3 %	22.3 %	ASTM D638
	22.3 %	22.3 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	10.8 %	10.8 %	ISO 527
	10.8 %	10.8 %	5 mm/min; ISO 527
	11.3 %	11.3 %	ASTM D638
	11.4 %	11.4 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	2.34 GPa	339 ksi	1 mm/min; ISO 527
	2.75 GPa	399 ksi	50 mm/min; ASTM D638
Flexural Strength	59.0 MPa	8560 psi	ISO 178
Flexural Yield Strength	59.0 MPa	8560 psi	2 mm/min; ISO 178
Flexural Modulus	2.06 GPa	299 ksi	ASTM D790
	2.07 GPa	300 ksi	1.3 mm/min, 50 mm span; ASTM D790
	2.10 GPa	305 ksi	ISO 178
	2.10 GPa	305 ksi	2 mm/min; 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 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTME 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 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	115 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTME 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 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
CTE, linear, Parallel to Flow	117 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	65.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 60.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 140 $\text{Å}^\circ\text{F}$	
	117 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	65.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	115 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature 23.0 - 60.0 $\text{Å}^\circ\text{C}$	@Temperature 73.4 - 140 $\text{Å}^\circ\text{F}$	
	115 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	
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 $\text{Å}^\circ\text{C}$ @Thickness 3.20 mm	307 $\text{Å}^\circ\text{F}$ @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
	84.0 $\text{Å}^\circ\text{C}$ @Thickness 3.20 mm	183 $\text{Å}^\circ\text{F}$ @Thickness 0.126 in	unannealed; ASTM D648

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