

LNPT[™] LUBRICOMP[™] COMPOUND KL001

KL-4010

DESCRIPTION

LNP LUBRICOMP KL001 compound is based on Acetal (POM) Copolymer resin containing 5% PTFE. Added features of this grade include: Wear Resistant.

GENERAL INFORMATION	
Features	Wear resistant
Fillers	Unreinforced, PTFE
Polymer Types	Acetal (POM) Copolymer
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL ⁽¹⁾			
Tensile Stress, yield	55	MPa	ASTM D638
Tensile Stress, break	52	MPa	ASTM D638
Tensile Strain, yield	9.8	%	ASTM D638
Tensile Strain, break	33.9	%	ASTM D638
Tensile Modulus, 50 mm/min	2750	MPa	ASTM D638
Flexural Modulus	3440	MPa	ASTM D790
Tensile Stress, yield	54	MPa	ISO 527
Tensile Stress, break	53	MPa	ISO 527
Tensile Strain, yield	11.4	%	ISO 527
Tensile Strain, break	29.6	%	ISO 527
Tensile Modulus, 1 mm/min	2620	MPa	ISO 527
Flexural Stress	70	MPa	ISO 178
Flexural Modulus	2000	MPa	ISO 178
IMPACT ⁽¹⁾			
Instrumented Dart Impact Energy @ peak, 23°C	5	J	ASTM D3763
THERMAL ⁽¹⁾			
HDT, 0.45 MPa, 3.2 mm, unannealed	157	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	112	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.19E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.13E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.18E-04	1/°C	ISO 11359-2

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, xflow	1.13E-04	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	149	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	96	°C	ISO 75/Af
PHYSICAL ⁽¹⁾			
Density	1.44	g/cm ³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs ⁽²⁾	2.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	2.3	%	ASTM D955
Mold Shrinkage, flow, 24 hrs ⁽²⁾	2.3	%	ISO 294
Mold Shrinkage, xflow, 24 hrs ⁽²⁾	2.3	%	ISO 294
Wear Factor Washer	22	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.38	-	ASTM D3702 Modified: Manual
Static COF	0.17	-	ASTM D3702 Modified: Manual
Density	1.43	g/cm ³	ISO 1183
FLAME CHARACTERISTICS ⁽³⁾			
UL Yellow Card Link	E121562-101284108	-	-
UL Recognized, 94HB Flame Class Rating	1.5	mm	UL 94
INJECTION MOLDING ⁽⁴⁾			
Drying Temperature	80	°C	
Drying Time	4	Hrs	
Melt Temperature	200 – 215	°C	
Front - Zone 3 Temperature	210 – 220	°C	
Middle - Zone 2 Temperature	195 – 205	°C	
Rear - Zone 1 Temperature	175 – 190	°C	
Mold Temperature	80 – 110	°C	
Back Pressure	0.2 – 0.3	MPa	
Screw Speed	30 – 60	rpm	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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