

# LNPTM LUBRICOMPTM COMPOUND KP004L

KL-4540 LE

## DESCRIPTION

LNP LUBRICOMP KP004L compound is based on Acetal (POM) Copolymer resin containing 20% PTFE/silicone. Added features of this grade include: Wear Resistant, Low Extractable.

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

  

INDUSTRY	SUB INDUSTRY
Building and Construction	Water Management
Consumer	Home Appliances
Packaging	Industrial Packaging, Food & Beverage

## TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>MECHANICAL <sup>(1)</sup></b>			
Tensile Stress, yield	47	MPa	ASTM D638
Tensile Stress, break	46	MPa	ASTM D638
Tensile Strain, yield	20.2	%	ASTM D638
Tensile Strain, break	39.6	%	ASTM D638
Tensile Modulus, 50 mm/min	2060	MPa	ASTM D638
Flexural Modulus	2060	MPa	ASTM D790
Tensile Stress, yield	47	MPa	ISO 527
Tensile Stress, break	46	MPa	ISO 527
Tensile Strain, yield	19.2	%	ISO 527
Tensile Strain, break	34.3	%	ISO 527
Tensile Modulus, 1 mm/min	2270	MPa	ISO 527
Flexural Stress	119	MPa	ISO 178
Flexural Modulus	2080	MPa	ISO 178
<b>IMPACT <sup>(1)</sup></b>			
Izod Impact, unnotched, 23°C	715	J/m	ASTM D4812
Izod Impact, notched, 23°C	53	J/m	ASTM D256
Instrumented Dart Impact Energy @ peak, 23°C	5	J	ASTM D3763
Multiaxial Impact	1	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	46	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	5	kJ/m <sup>2</sup>	ISO 180/1A
<b>THERMAL <sup>(1)</sup></b>			

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 0.45 MPa, 3.2 mm, unannealed	151	°C	ASTM D648
HDT, 1.82 MPa, 3.2mm, unannealed	81	°C	ASTM D648
CTE, -40°C to 40°C, flow	1.17E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.17E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, flow	1.18E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.17E-04	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	145	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	88	°C	ISO 75/Af
<b>PHYSICAL <sup>(1)</sup></b>			
Density	1.48	g/cm <sup>3</sup>	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.2	%	ASTM D570
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	2 – 3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	1.5 – 2.5	%	ASTM D955
Mold Shrinkage, flow, 24 hrs <sup>(2)</sup>	2.9	%	ISO 294
Mold Shrinkage, xflow, 24 hrs <sup>(2)</sup>	2.4	%	ISO 294
Wear Factor Washer	9	10 <sup>-4</sup> -10 in <sup>3</sup> -min/ft-lb-hr	ASTM D3702 Modified: Manual
Dynamic COF	0.27	-	ASTM D3702 Modified: Manual
Static COF	0.15	-	ASTM D3702 Modified: Manual
Density	1.48	g/cm <sup>3</sup>	ISO 1183
<b>INJECTION MOLDING <sup>(3)</sup></b>			
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) 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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