

LNP™ LUBRICOMP™ KP004L compound

Acetal (POM) Copolymer

SABIC Innovative Plastics

Message:

LNP LUBRICOMP KP004L is a compound based on Acetal Copolymer resin containing PTFE, Silicone. Added features of this material include: Internally Lubricated, Low Extractible.

Also known as: LNP* LUBRICOMP* Compound KL-4540 LE

Product reorder name: KP004L

General Information			
Additive	PTFE silicone lubricant		
Features	Low extract		
	Lubrication		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.48	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 24 hours	2.8 - 3.0	%	ASTM D955
Transverse flow: 24 hours	2.3 - 2.5	%	ASTM D955
Vertical flow direction: 24 hours	2.4	%	ISO 294-4
Flow direction: 24 hours	2.9	%	ISO 294-4
Water Absorption (24 hr, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2070	MPa	ASTM D638
--	2270	MPa	ISO 527-2/1
Tensile Strength			
Yield	47.6	MPa	ASTM D638
Yield	47.0	MPa	ISO 527-2
Fracture	46.2	MPa	ASTM D638
Fracture	46.0	MPa	ISO 527-2
Tensile Elongation			
Yield	20	%	ASTM D638
Yield	19	%	ISO 527-2
Fracture	40	%	ASTM D638
Fracture	34	%	ISO 527-2
Flexural Modulus			
--	2070	MPa	ASTM D790
--	5400	MPa	ISO 178
Flexural Stress	119	MPa	ISO 178

Coefficient of Friction			ASTM D3702 Modified
With self-dynamics	0.27		ASTM D3702 Modified
With Self-Static	0.15		ASTM D3702 Modified
Wear Factor - Washer	9.00	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	53	J/m	ASTM D256
23°C ²	5.4	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	720	J/m	ASTM D4812
23°C ³	46	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	5.00	J	ASTM D3763
--	1.50	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	151	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁴	145	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	81.7	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁵	88.0	°C	ISO 75-2/Af
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	1.2E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	1.2E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Rear Temperature	177 - 188	°C	
Middle Temperature	193 - 204	°C	
Front Temperature	210 - 221	°C	
Processing (Melt) Temp	199 - 216	°C	
Mold Temperature	82.2 - 110	°C	
Back Pressure	0.172 - 0.344	MPa	
Screw Speed	30 - 60	rpm	
NOTE			
1.	50 mm/min		
2.	80*10*4		
3.	80*10*4		
4.	80*10*4 mm		
5.	80*10*4 mm		

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