

LNP™ LUBRICOMP™ KP002 compound

Acetal (POM) Copolymer

SABIC Innovative Plastics

Message:

LNP LUBRICOMP KP002 is a compound based on Acetal Copolymer resin containing PTFE, Silicone. Added features of this material include: Internally Lubricated.

Also known as: LNP* LUBRICOMP* Compound KL-4520

Product reorder name: KP002

General Information			
Additive	PTFE silicone lubricant		
Features	Lubrication		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.43	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 24 hours	2.2	%	ASTM D955
Transverse flow: 24 hours	2.2	%	ASTM D955
Vertical flow direction: 24 hours	2.2	%	ISO 294-4
Flow direction: 24 hours	2.2	%	ISO 294-4
Water Absorption (24 hr, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2760	MPa	ASTM D638
--	2330	MPa	ISO 527-2/1
Tensile Strength			
Yield	46.9	MPa	ASTM D638
Yield ²	49.1	MPa	ASTM D638
Yield	46.0	MPa	ISO 527-2
Yield	49.6	MPa	ISO 527-2/5
Fracture	46.9	MPa	ASTM D638
Fracture ³	48.1	MPa	ASTM D638
Fracture	48.5	MPa	ISO 527-2/5
Tensile Elongation			
Yield	26	%	ASTM D638
Yield ⁴	18	%	ASTM D638
Yield	29	%	ISO 527-2
Yield	18	%	ISO 527-2/5
Fracture	41	%	ASTM D638
Fracture ⁵	29	%	ASTM D638
Fracture	28	%	ISO 527-2/5

Flexural Modulus			
--	2070	MPa	ASTM D790
50.0mm span ⁶	1920	MPa	ASTM D790
--	2000	MPa	ISO 178
-- ⁷	1990	MPa	ISO 178
Flexural Stress			ISO 178
--	61.0	MPa	ISO 178
--	69.3	MPa	ISO 178
Coefficient of Friction			ASTM D3702 Modified
With self-dynamics	0.31		ASTM D3702 Modified
With Self-Static	0.18		ASTM D3702 Modified
Flexural Strain at Break ⁸	7.0	%	ISO 178
Wear Factor - Washer	8.50	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 ⁹	5.1	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	1100	J/m	ASTM D4812
23°C ¹⁰	74	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	5.10	J	ASTM D3763
--	1.80	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	156	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹¹	146	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	92.8	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	87.0	°C	ISO 75-2/Af
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	1.1E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	1.0E-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.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	Type 1, 5.0 mm/min
5.	Type 1, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	2 mm/min
9.	80*10*4
10.	80*10*4
11.	80*10*4 mm
12.	80*10*4 mm

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