

LNP™ LUBRICOMP™ KP004 compound

Acetal (POM) Copolymer

SABIC Innovative Plastics

Message:

LNP LUBRICOMP* KP004 is a compound based on Acetal Copolymer resin containing 20% PTFE/Silicone. Added feature of this material is: Wear Resistant.

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

Product Reorder name: KP004

General Information			
Additive	PTFE + Silicone Lubricant (20%)		
Features	Good Wear Resistance		
	Lubricated		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.48	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			ASTM D955
Flow : 24 hr	2.1 to 2.9	%	
Across Flow : 24 hr	2.1 to 2.9	%	
Water Absorption			
24 hr, 50% RH	0.18	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.43	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1830	MPa	ASTM D638
--	2020	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	43.0	MPa	ASTM D638
Yield	39.0	MPa	ISO 527-2/5
Break ³	43.0	MPa	ASTM D638
Break	39.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	14	%	ASTM D638
Yield	22	%	ISO 527-2/5
Break ⁵	30	%	ASTM D638
Break	43	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	2020	MPa	ASTM D790
-- ⁷	2080	MPa	ISO 178
Flexural Stress			
--	60.0	MPa	ISO 178

Break, 50.0 mm Span ⁸	63.0	MPa	ASTM D790
Coefficient of Friction			ASTM D3702 Modified
vs. Itself - Dynamic	0.25		
vs. Itself - Static	0.14		
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 ⁹	5.1	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	620	J/m	ASTM D4812
23°C ¹⁰	42	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	3.90	J	ASTM D3763
--	1.06	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Unannealed, 3.20 mm	87.2	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	79.0	°C	ISO 75-2/Af
CLTE			ASTM E831
Flow : -40 to 40°C	1.1E-4	cm/cm/°C	
Transverse : -40 to 40°C	1.1E-4	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Rear Temperature	177 to 188	°C	
Middle Temperature	193 to 204	°C	
Front Temperature	210 to 221	°C	
Processing (Melt) Temp	199 to 216	°C	
Mold Temperature	82.2 to 110	°C	
Back Pressure	0.172 to 0.344	MPa	
Screw Speed	30 to 60	rpm	
NOTE			
1.	50 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*4		

10.	80*10*4
11.	80*10*4 mm

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