

LNP™ LUBRICOMP™ SP003 compound

Polyamide 12

SABIC Innovative Plastics

Message:

LNP LUBRICOMP SP003 is a compound based on Nylon 12 resin containing PTFE, Silicone. Added features of this material include: Internally Lubricated.

Also known as: LNP* LUBRICOMP* Compound SL-4530

Product reorder name: SP003

General Information			
Additive	PTFE silicone lubricant		
Features	Lubrication		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.09	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 24 hours	0.90 - 1.1	%	ASTM D955
Transverse flow: 24 hours	1.8 - 2.0	%	ASTM D955
Vertical flow direction: 24 hours	1.9	%	ISO 294-4
Flow direction: 24 hours	1.0	%	ISO 294-4
Water Absorption (24 hr, 50% RH)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1380	MPa	ASTM D638
--	1580	MPa	ISO 527-2/1
Tensile Strength			
Yield	37.9	MPa	ASTM D638
Yield	38.0	MPa	ISO 527-2
Fracture	35.2	MPa	ASTM D638
Fracture	36.0	MPa	ISO 527-2
Tensile Elongation			
Yield	18	%	ASTM D638, ISO 527-2
Fracture	24	%	ASTM D638
Fracture	33	%	ISO 527-2
Flexural Modulus			
--	1380	MPa	ASTM D790
--	1300	MPa	ISO 178
Flexural Stress	44.0	MPa	ISO 178
Coefficient of Friction			
With self-dynamics	0.23		ASTM D3702 Modified
With Self-Static	0.14		ASTM D3702 Modified
Wear Factor - Washer	13.5	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	4.6	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	680	J/m	ASTM D4812
23°C ³	48	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	5.00	J	ASTM D3763
--	7.80	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	150	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁴	134	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	146	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁵	147	°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	1.1E-4	cm/cm/°C	ASTM E831, ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.12 - 0.20	%	
Rear Temperature	216 - 227	°C	
Middle Temperature	221 - 232	°C	
Front Temperature	227 - 238	°C	
Processing (Melt) Temp	227 - 238	°C	
Mold Temperature	71.1 - 82.2	°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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