

LNP™ LUBRICOMP™ FL004 compound

Polyethylene

SABIC Innovative Plastics

Message:

LNP* LUBRICOMP* FL004 is a compound based on Polyethylene resin containing 20% PTFE. Added feature of this material is: Wear Resistant.

Also known as: LNP* LUBRICOMP* Compound FL-4040

Product reorder name: FL004

General Information			
Additive	PTFE Lubricant (20%)		
Features	Good Wear Resistance		
	Lubricated		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.08	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow : 24 hr	3.0 to 5.0	%	
Across Flow : 24 hr	1.0 to 3.0	%	
Water Absorption			
24 hr, 50% RH	4.5E-3	%	ASTM D570
Equilibrium, 23°C, 50% RH	2.5E-3	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1250	MPa	ASTM D638
--	1010	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	23.0	MPa	ASTM D638
Yield	23.0	MPa	ISO 527-2/5
Break	25.5	MPa	ASTM D638
Break ³	12.0	MPa	ASTM D638
Break	6.00	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	8.2	%	ASTM D638
Yield	7.9	%	ISO 527-2/5
Break	42	%	ASTM D638
Break ⁵	150	%	ASTM D638
Break	78	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	938	MPa	ASTM D790
--	1010	MPa	ASTM D790

-- ⁷	935	MPa	ISO 178
Flexural Strength			
--	20.7	MPa	ASTM D790
--	19.0	MPa	ISO 178
Coefficient of Friction			ASTM D3702 Modified
vs. Itself - Dynamic	0.18		
vs. Itself - Static	0.11		
Wear Factor			ASTM D3702 Modified
Ring	-0.200	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	
Washer	9.00	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	37	J/m	ASTM D256
23°C ⁸	3.6	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	1000	J/m	ASTM D4812
23°C ⁹	100	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	13.4	J	ASTM D3763
--	7.20	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	74.0	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	82.0	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	53.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	59.0	°C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -30 to 30°C	1.4E-4	cm/cm/°C	
Transverse : -30 to 30°C	1.2E-4	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Rear Temperature	195 to 205	°C	
Middle Temperature	210 to 220	°C	
Front Temperature	220 to 230	°C	
Processing (Melt) Temp	230	°C	
Mold Temperature	40.0 to 55.0	°C	
Back Pressure	0.200 to 0.300	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.	80*10*4
9.	80*10*4
10.	80*10*4 mm
11.	80*10*4 mm

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