

LNP™ LUBRICOMP™ HFG25Z compound

Polyamide 11

SABIC Innovative Plastics

Message:

LNP LUBRICOMP HFG25Z is a compound based on Nylon 11 resin containing Glass Fiber, Graphite Powder. Added features of this material include: Internally Lubricated.

Also known as: LNP* LUBRICOMP* Compound HFL-4325

Product reorder name: HFG25Z

General Information			
Filler / Reinforcement	Glass fiber reinforced material		
Additive	Graphite powder lubricant		
Features	Lubrication		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.30	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow	0.47	%	Internal method
Flow: 24 hours	0.40 - 0.60	%	ASTM D955
Transverse flow	0.93	%	Internal method
Transverse flow: 24 hours	0.80 - 1.0	%	ASTM D955
Vertical flow direction: 24 hours	0.93	%	ISO 294-4
Flow direction: 24 hours	0.47	%	ISO 294-4
Water Absorption (24 hr, 50% RH)	0.10	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	11000	MPa	ASTM D638
--	6830	MPa	ISO 527-2/1
Tensile Strength			
Yield	152	MPa	ASTM D638
Yield ²	153	MPa	ASTM D638
Yield	76.0	MPa	ISO 527-2, ISO 527-2/5
Fracture	152	MPa	ASTM D638
Fracture ³	153	MPa	ASTM D638
Fracture	76.0	MPa	ISO 527-2, ISO 527-2/5
Tensile Elongation			
Yield	2.7	%	ASTM D638
Yield ⁴	2.8	%	ASTM D638
Yield	2.3	%	ISO 527-2, ISO 527-2/5
Fracture	2.7	%	ASTM D638
Fracture ⁵	2.8	%	ASTM D638

Fracture	2.4	%	ISO 527-2, ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	5520	MPa	ASTM D790
--	5520	MPa	ASTM D790
--	18200	MPa	ISO 178
-- ⁷	18200	MPa	ISO 178
Flexural Strength			
--	96.5	MPa	ASTM D790
--	352	MPa	ISO 178
--	352	MPa	ISO 178
Yield, 50.0mm span ⁸	98.0	MPa	ASTM D790
Coefficient of Friction			
With self-dynamics	0.42		ASTM D3702 Modified
With Self-Static	0.46		ASTM D3702 Modified
Wear Factor - Washer	58.0	10 ⁻¹⁰ in ⁵ -min/ft-lb-hr	ASTM D3702 Modified
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	69	J/m	ASTM D256
23°C ⁹	7.2	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	450	J/m	ASTM D4812
23°C ¹⁰	29	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	15.1	J	ASTM D3763
--	3.30	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	182	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ¹¹	182	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	171	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	166	°C	ISO 75-2/Af
Linear thermal expansion coefficient			
Flow: -40 to 40°C	9.2E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Flow: 23 to 60°C	9.2E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	3.4E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	3.5E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 60°C	3.5E-5	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.15	%	
Rear Temperature	199 - 210	°C	

Middle Temperature	232 - 243	°C
Front Temperature	260 - 271	°C
Processing (Melt) Temp	227 - 260	°C
Mold Temperature	43.3 - 54.4	°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.	1.3 mm/min
9.	80*10*4
10.	80*10*4
11.	80*10*4 mm
12.	80*10*4 mm

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