SABIC Innovative Plastics LNP LUBRICOMP HFG25Z PA 11 (Asia Pacific)

Category : Polymer , Thermoplastic , Nylon , Nylon 11

Material Notes:

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

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-HFG25Z-PA-11-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Density	1.30 g/cc	0.0470 lb/inÂ³	ASTM D792
	1.30 g/cc	0.0470 lb/inÂ³	ISO 1183
Moisture Absorption	0.100 %	0.100 %	50% RH, 24 hrs; ASTM D570
Linear Mold Shrinkage, Flow	0.0047 cm/cm	0.0047 in/in	SABIC Method
	0.0047 cm/cm @Time 86400 sec	0.0047 in/in @Time 24.0 hour	ISO 294
	0.0040 - 0.0060 cm/cm @Time 86400 sec	0.0040 - 0.0060 in/in @Time 24.0 hour	ASTM D955
Linear Mold Shrinkage, Transverse	0.0093 cm/cm	0.0093 in/in	SABIC Method
	0.0080 - 0.010 cm/cm @Time 86400 sec	0.0080 - 0.010 in/in @Time 24.0 hour	ASTM D955
	0.0093 cm/cm @Time 86400 sec	0.0093 in/in @Time 24.0 hour	ISO 294

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	76.0 MPa	11000 psi	ISO 527
	76.0 MPa	11000 psi	5 mm/min; ISO 527
	152 MPa	22000 psi	ASTM D638
	153 MPa	22200 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	76.0 MPa	11000 psi	ISO 527
	76.0 MPa	11000 psi	5 mm/min; ISO 527
	152 MPa	22000 psi	ASTM D638

Mechanical Properties	Metric	English	Comments
	153 MPa	22200 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.3 %	2.3 %	ISO 527
	2.4 %	2.4 %	5 mm/min; ISO 527
	2.7 %	2.7 %	ASTM D638
	2.8 %	2.8 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.2 %	2.2 %	ISO 527
	2.3 %	2.3 %	5 mm/min; ISO 527
	2.7 %	2.7 %	ASTM D638
	2.8 %	2.8 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	6.83 GPa	991 ksi	1 mm/min; ISO 527
	11.03 GPa	1600 ksi	50 mm/min; ASTM D638
Flexural Strength	96.0 MPa	13900 psi	ASTM D790
	352 MPa	51100 psi	ISO 178
Flexural Yield Strength	98.0 MPa	14200 psi	1.3 mm/min, 50 mm span; ASTM D790
	352 MPa	51100 psi	2 mm/min; ISO 178
Flexural Modulus	5.51 GPa	799 ksi	ASTM D790
	5.52 GPa	801 ksi	1.3 mm/min, 50 mm span; ASTM D790
	18.2 GPa	2640 ksi	ISO 178
	18.2 GPa	2640 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.690 J/cm	1.29 ft-lb/in	ASTM D256
Izod Impact, Unnotched	4.53 J/cm	8.49 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	7.00 kJ/mÂ²	3.33 ft-lb/inÂ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	29.0 kJ/mÂ²	13.8 ft-lb/inÂ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	15.0 J	11.1 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	3.00 J	2.21 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.41	0.41	ASTM D3702 Modified
Coefficient of Friction, Static	0.45	0.45	ASTM D3702 Modified

Mechanical Properties	Metric	English	Comments
K (wear) Factor	111 x 10^{-8} mmÂ³/N-M	58.0 x 10^{-10} inÂ³-min/ft-lb-hr	Washer, ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	91.8 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	51.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	92.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	51.1 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	92.0 Âµm/m-Â°C @Temperature 23.0 - 60.0 Â°C	51.1 Âµin/in-Â°F @Temperature 73.4 - 140 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	34.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	19.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	35.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	19.4 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	35.0 Âµm/m-Â°C @Temperature 23.0 - 60.0 Â°C	19.4 Âµin/in-Â°F @Temperature 73.4 - 140 Â°F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	182 Â°C	360 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	182 Â°C @Thickness 3.20 mm	360 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	166 Â°C	331 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	171 Â°C @Thickness 3.20 mm	340 Â°F @Thickness 0.126 in	unannealed; ASTM D648

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