

SABIC Innovative Plastics LNP LUBRICOMP IAL12 PA6.12

Category : Polymer , Thermoplastic , Nylon , Nylon 612

Material Notes:

LNP* LUBRICOMP* IAL12 is a compound based on Nylon 6/12 resin containing 5% PTFE, 10% Aramid Fiber. 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-IAL12-PA612.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.13 g/cc	1.13 g/cc	ASTM D792
Density	1.12 g/cc	0.0405 lb/in ³	ISO 1183
Moisture Absorption	0.210 %	0.210 %	50% RH, 24 hrs; ASTM D570
	0.320 %	0.320 %	23 ^o C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	>= 0.020 cm/cm	>= 0.020 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.020 - 0.040 cm/cm	0.020 - 0.040 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	63.0 MPa	9140 psi	5 mm/min; ISO 527
	65.0 MPa	9430 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	8.6 %	8.6 %	Type I, 5 mm/min; ASTM D638
	8.8 %	8.8 %	5 mm/min; ISO 527
Elongation at Yield	8.1 %	8.1 %	Type I, 5 mm/min; ASTM D638
	8.2 %	8.2 %	5 mm/min; ISO 527
Tensile Modulus	2.92 GPa	424 ksi	1 mm/min; ISO 527
	3.16 GPa	458 ksi	50 mm/min; ASTM D638
Flexural Strength	74.0 MPa	10700 psi	ISO 178
Flexural Modulus	2.63 GPa	381 ksi	2 mm/min; ISO 178
	2.84 GPa	412 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	0.430 J/cm	0.806 ft-lb/in	ASTM D256

Mechanical Properties <i>Izod Impact, Unnotched</i>	Metric <i>kJ/cm</i>	English <i>ft-lb/in</i>	Comments <i>ASTM D4812</i>
Izod Impact, Notched (ISO)	2.00 kJ/m ²	0.952 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	38.0 kJ/m ²	18.1 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	4.00 J @Temperature 23.0 Â°C	2.95 ft-lb @Temperature 73.4 Â°F	ASTM D3763
Impact Test	1.00 J	0.738 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.45	0.45	ASTM D3702 Modified
Coefficient of Friction, Static	0.40	0.40	ASTM D3702 Modified
K (wear) Factor	62.4 x 10 ⁻⁸ mm ³ /N-M	31.0 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr	Washer; ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	85.9 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	47.7 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
CTE, linear, Transverse to Flow	107 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	59.4 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	172 Â°C	342 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	187 Â°C @Thickness 3.20 mm	369 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	90.0 Â°C	194 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	92.0 Â°C @Thickness 3.20 mm	198 Â°F @Thickness 0.126 in	unannealed; ASTM D648

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