

SABIC Innovative Plastics LNP Lubricomp SX93441D PA6.12

Category : Polymer , Thermoplastic , Nylon , Nylon 612

Material Notes:

LNP* Lubricomp* SX93441D is a compound based on Nylon 6/12 containing Proprietary Fillers. Characteristics of this grade are: Internally Lubricated. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Lubricomp-SX93441D-PA612.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D 792
Density	1.19 g/cc	0.0430 lb/in ³	ASTM D 792
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23Â°C / 50% RH; ISO 62
	0.15 %	0.15 %	50% RH; ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0030 - 0.0060 cm/cm	0.0030 - 0.0060 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0090 - 0.020 cm/cm	0.0090 - 0.020 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	86.0 MPa	12500 psi	Type I, 5 mm/min; ASTM D 638
	91.0 MPa	13200 psi	5 mm/min; ISO 527
Tensile Strength, Yield	92.0 MPa	13300 psi	5 mm/min; ISO 527
	93.0 MPa	13500 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	6.1 %	6.1 %	Type I, 5 mm/min; ASTM D 638
	6.3 %	6.3 %	5 mm/min; ISO 527
Elongation at Yield	4.9 %	4.9 %	Type I, 5 mm/min; ASTM D 638
	4.9 %	4.9 %	5 mm/min; ISO 527
Tensile Modulus	5.41 GPa	785 ksi	50 mm/min; ASTM D 638
	5.41 GPa	785 ksi	1 mm/min; ISO 527
Flexural Strength	136 MPa	19700 psi	ISO 178

Mechanical Properties	Metric	English	Comments
	4.72 GPa	685 ksi	2 mm/min; ISO 178
Izod Impact, Notched	1.27 J/cm @Temperature 23.0 Â°C	2.38 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	8.70 J/cm @Temperature 23.0 Â°C	16.3 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	10.0 kJ/mÂ² @Temperature 23.0 Â°C	4.76 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	58.0 kJ/mÂ² @Temperature 23.0 Â°C	27.6 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	3.00 J	2.21 ft-lb	Multiaxial Impact; ISO 6603
	16.0 J @Temperature 23.0 Â°C	11.8 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763
Coefficient of Friction, Dynamic	0.48	0.48	ASTM D 3702 Modified
Coefficient of Friction, Static	0.47	0.47	ASTM D 3702 Modified
K (wear) Factor	14.1 x 10 ⁻⁸ mmÂ³/N-M	7.00 x 10 ⁻¹⁰ inÂ³- min/ft-lb-hr	Ring; ASTM D 3702 Modified
	103 x 10 ⁻⁸ mmÂ³/N-M	51.0 x 10 ⁻¹⁰ inÂ³- min/ft-lb-hr	Washer; ASTM D 3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	22.2 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D 696
Deflection Temperature at 0.46 MPa (66 psi)	170 Â°C	338 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	175 Â°C @Thickness 3.20 mm	347 Â°F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	146 Â°C	295 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	161 Â°C	322 Â°F	

Thermal Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	unannealed; ASTM D 648 Comments
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