

SABIC Innovative Plastics LNP Lubricomp IP003 PA6.12

Category : Polymer , Thermoplastic , Nylon , Nylon 612

Material Notes:

LNP* Lubricomp* IP003 is a Nylon 6/12 base resin containing PTFE and Silicone. 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-IP003-PA612.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.16 g/cc	1.16 g/cc	ASTM D 792
Density	1.16 g/cc	0.0419 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.020 %	0.020 %	23 ^o C / 50% RH; ISO 62
	0.020 % @Time 86400 sec	0.020 % @Time 24.0 hour	50% RH; ASTM D 570
Linear Mold Shrinkage, Flow	0.010 - 0.030 cm/cm	0.010 - 0.030 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.010 - 0.030 cm/cm	0.010 - 0.030 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	43.0 MPa	6240 psi	5 mm/min; ISO 527
	44.0 MPa	6380 psi	Type I, 5 mm/min; ASTM D 638
Tensile Strength, Yield	43.0 MPa	6240 psi	5 mm/min; ISO 527
	44.0 MPa	6380 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	13.7 %	13.7 %	5 mm/min; ISO 527
	17.5 %	17.5 %	Type I, 5 mm/min; ASTM D 638
Elongation at Yield	13.7 %	13.7 %	5 mm/min; ISO 527
	17.3 %	17.3 %	Type I, 5 mm/min; ASTM D 638
Tensile Modulus	1.96 GPa	284 ksi	1 mm/min; ISO 527
	2.02 GPa	293 ksi	50 mm/min; ASTM D 638
Flexural Strength	62.0 MPa	8990 psi	ISO 178

Flexural Modulus Mechanical Properties	1.87 GPa Metric	271 ksi English	2 mm/min; ISO 178 Comments
	1.91 GPa	277 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.300 J/cm @Temperature 23.0 Â°C	0.562 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	5.59 J/cm @Temperature 23.0 Â°C	10.5 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	3.00 kJ/mÂ² @Temperature 23.0 Â°C	1.43 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	28.0 kJ/mÂ² @Temperature 23.0 Â°C	13.3 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	1.00 J @Temperature 23.0 Â°C	0.738 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Total Energy; ASTM D 3763
Coefficient of Friction, Dynamic	0.21	0.21	ASTM D 3702 Modified
Coefficient of Friction, Static	0.11	0.11	ASTM D 3702 Modified
K (wear) Factor	22.2 x 10 ⁻⁸ mmÂ³/N-M	11.0 x 10 ⁻¹⁰ inÂ³- min/ft-lb-hr	Washer; ASTM D 3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	112 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	62.2 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D 696
CTE, linear, Transverse to Flow	127 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	70.6 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D 696
Deflection Temperature at 0.46 MPa (66 psi)	146 Â°C	295 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	156 Â°C @Thickness 3.20 mm	313 Â°F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	61.0 Â°C	142 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	54.0 Â°C	129 Â°F	unannealed; ASTM D 648

Thermal Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
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