

SABIC Innovative Plastics LNP LUBRICOMP SP003 PA 12 (Asia Pacific)

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

LNP* Lubricomp* SP003 is a compound based on Nylon 12 resin containing PTFE, Silicone. 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-SP003-PA-12-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Density	1.09 g/cc	0.0394 lb/in ³	ASTM D792
	1.09 g/cc	0.0394 lb/in ³	ISO 1183
Moisture Absorption	0.200 %	0.200 %	50% RH, 24 hrs; ASTM D570
Linear Mold Shrinkage, Flow	0.0090 - 0.011 cm/cm	0.0090 - 0.011 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.018 - 0.020 cm/cm	0.018 - 0.020 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.019 cm/cm	0.019 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	35.0 MPa	5080 psi	ASTM D638
	36.0 MPa	5220 psi	ISO 527
Tensile Strength, Yield	37.0 MPa	5370 psi	ASTM D638
	38.0 MPa	5510 psi	ISO 527
Elongation at Break	23.9 %	23.9 %	ASTM D638
	32.9 %	32.9 %	ISO 527
Elongation at Yield	17.5 %	17.5 %	ASTM D638
	18.4 %	18.4 %	ISO 527
Tensile Modulus	1.37 GPa	199 ksi	50 mm/min; ASTM D638

Mechanical Properties	1.58 GPa Metric	229 ksi English	1 mm/min: ISO 527 Comments
Flexural Strength	44.0 MPa	6380 psi	ISO 178
Flexural Modulus	1.30 GPa	189 ksi	ISO 178
	1.37 GPa	199 ksi	ASTM D790
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	ASTM D256
Izod Impact, Unnotched	6.83 J/cm	12.8 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	4.00 kJ/m ²	1.90 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	48.0 kJ/m ²	22.8 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	5.00 J	3.69 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	7.00 J	5.16 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.23	0.23	ASTM D3702 Modified
Coefficient of Friction, Static	0.14	0.14	ASTM D3702 Modified
K (wear) Factor	26.2 x 10 ⁻⁸ mm ³ /N-M	13.0 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr	Washer; ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	112 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	62.2 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	113 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	62.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	108 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	60.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	134 $\text{Å}^\circ\text{C}$	273 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	150 $\text{Å}^\circ\text{C}$	302 $\text{Å}^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	147 $\text{Å}^\circ\text{C}$	297 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af

Thermal Properties	Metric	English	Comments
	146 °C	296 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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