

SABIC Innovative Plastics LNP LUBRICOMP SCL36 PA12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

LNP* LUBRICOMP* SCL36 is a compound based on Nylon 12 resin containing 15% PTFE, 30% Carbon Fiber. Added features of this material include: Wear Resistant, Electrically Conductive.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-SCL36-PA12.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Density	1.30 g/cc	0.0470 lb/in ³	ASTM D792
Moisture Absorption	0.0900 %	0.0900 %	50% RH, 24 hrs; ASTM D570
	0.140 %	0.140 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.00040 - 0.00060 cm/cm @Time 86400 sec	0.00040 - 0.00060 in/in @Time 24.0 hour	ASTM D955
Linear Mold Shrinkage, Transverse	0.0040 - 0.0060 cm/cm @Time 86400 sec	0.0040 - 0.0060 in/in @Time 24.0 hour	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	130 MPa	18900 psi	5 mm/min; ISO 527
	157 MPa	22800 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	1.0 %	1.0 %	5 mm/min; ISO 527
	1.9 %	1.9 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	19.42 GPa	2817 ksi	1 mm/min; ISO 527
	21.4 GPa	3100 ksi	50 mm/min; ASTM D638
Flexural Strength	206 MPa	29900 psi	ISO 178
	214 MPa	31000 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Yield Strength	215 MPa	31200 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	15.8 GPa	2290 ksi	1.3 mm/min, 50 mm span; ASTM D790
	16.49 GPa	2392 ksi	2 mm/min; ISO 178

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	1.29 J/cm	2.12 ft-lb/in	ASTM D256
Izod Impact, Unnotched	6.86 J/cm	12.9 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	129 kJ/m ²	61.4 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	39.0 kJ/m ²	18.6 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	14.0 J @Temperature 23.0 Â°C	10.3 ft-lb @Temperature 73.4 Â°F	ASTM D3763
Impact Test	4.00 J	2.95 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.41	0.41	ASTM D3702 Modified
Coefficient of Friction, Static	0.30	0.30	ASTM D3702 Modified
K (wear) Factor	44.3 x 10 ⁻⁸ mm ³ /N-M	22.0 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr	Washer; ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	29.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	16.1 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
CTE, linear, Transverse to Flow	63.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	35.0 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	177 Â°C	351 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	178 Â°C @Thickness 3.20 mm	352 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	170 Â°C	338 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	173 Â°C @Thickness 3.20 mm	343 Â°F @Thickness 0.126 in	unannealed; ASTM D648

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