

SABIC Innovative Plastics LNP LUBRICOMP QCL349 PA6.10

Category : Polymer , Thermoplastic , Nylon , Nylon 610

Material Notes:

LNP* LUBRICOMP* QCL349 is a compound based on Nylon 6/10 resin containing 15% PTFE, 20% Carbon Fiber. Added features of this material include: Wear Resistant, Flame Retardant, Electrically Conductive.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-QCL349-PA610.php

Physical Properties	Metric	English	Comments
Density	1.52 g/cc	0.0549 lb/in ³	ASTM D792
	1.52 g/cc	0.0549 lb/in ³	ISO 1183
Moisture Absorption	0.100 %	0.100 %	50% RH, 24 hrs; ASTM D570
Linear Mold Shrinkage, Flow	0.0010 cm/cm	0.0010 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0011 cm/cm	0.0011 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0078 cm/cm	0.0078 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	158 MPa	22900 psi	ASTM D638
	162 MPa	23500 psi	
Tensile Strength, Yield	162 MPa	23500 psi	ISO 527
	168 MPa	24400 psi	
Elongation at Break	1.6 %	1.6 %	ISO 527
	1.9 %	1.9 %	
Elongation at Yield	1.6 %	1.6 %	ISO 527
	1.8 %	1.8 %	
Tensile Modulus	15.75 GPa	2284 ksi	1 mm/min; ISO 527

Mechanical Properties	16.54 GPa Metric	2399 ksi English	50 mm/min; ASTM D638 Comments
Flexural Strength	239 MPa	34700 psi	ISO 178
	241 MPa	35000 psi	ASTM D790
Flexural Modulus	13.0 GPa	1890 ksi	ISO 178
	13.1 GPa	1900 ksi	ASTM D790
Izod Impact, Notched	0.530 J/cm	0.993 ft-lb/in	ASTM D256
Izod Impact, Unnotched	5.34 J/cm	10.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	5.00 kJ/m ²	2.38 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	32.0 kJ/m ²	15.2 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	4.00 J	2.95 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	2.00 J	1.48 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.34	0.34	ASTM D3702 Modified
Coefficient of Friction, Static	0.28	0.28	ASTM D3702 Modified
K (wear) Factor	894 x 10 ⁻⁸ mm ³ /N-M	444 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	Washer; ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	55.8 µm/m-°C	31.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	57.0 µm/m-°C	31.7 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	19.0 µm/m-°C	10.6 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	19.8 µm/m-°C	11.0 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 0.46 MPa (66 psi)	218 °C	424 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	217 °C	423 °F	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648

Thermal Properties (20°C)	Metric	English	Comments
Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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