

SABIC Innovative Plastics LNP LUBRICOMP ICL34 PA6.12

Category : Polymer , Thermoplastic , Nylon , Nylon 612

Material Notes:

LNP* LUBRICOMP* ICL34 is a compound based on Nylon 6/12 containing 20% Carbon Fiber, 15% PTFE. Added features include: Wear Resistant.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-ICL34-PA612.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.26 g/cc	1.26 g/cc	ASTM D792
Density	1.25 g/cc	0.0452 lb/in ³	ASTM D792
Moisture Absorption	0.150 %	0.150 %	50% RH, 24 hrs; ASTM D570
	0.230 %	0.230 %	23 ^o C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0010 - 0.0040 cm/cm	0.0010 - 0.0040 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0070 - 0.010 cm/cm	0.0070 - 0.010 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	177 MPa	25700 psi	5 mm/min; ISO 527
	182 MPa	26400 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	177 MPa	25700 psi	5 mm/min; ISO 527
	182 MPa	26400 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.3 %	2.3 %	5 mm/min; ISO 527
	2.5 %	2.5 %	Type I, 5 mm/min; ASTM D638
Elongation at Yield	2.3 %	2.3 %	5 mm/min; ISO 527
	2.5 %	2.5 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	14.77 GPa	2142 ksi	1 mm/min; ISO 527
	15.74 GPa	2283 ksi	50 mm/min; ASTM D638
Flexural Strength	253 MPa	36700 psi	ISO 178
	266 MPa	38600 psi	1.3 mm/min, 50 mm span; ASTM D790

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	26.7 MPa	38700 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	11.8 GPa	1710 ksi	1.3 mm/min, 50 mm span; ASTM D790
	11.96 GPa	1735 ksi	2 mm/min; ISO 178
Izod Impact, Notched	0.940 J/cm	1.76 ft-lb/in	ASTM D256
Izod Impact, Unnotched	8.30 J/cm	15.5 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	51.0 kJ/m ²	24.3 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	8.00 J @Temperature 23.0 Â°C	5.90 ft-lb @Temperature 73.4 Â°F	ASTM D3763
Impact Test	2.00 J	1.48 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.48	0.48	ASTM D3702 Modified
Coefficient of Friction, Static	0.33	0.33	ASTM D3702 Modified
K (wear) Factor	28.2 x 10 ⁻⁸ mm ³ /N-M	14.0 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr	Washer; ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	27.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	15.0 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
CTE, linear, Transverse to Flow	81.0 Âµm/m-Â°C @Temperature -30.0 - 30.0 Â°C	45.0 Âµin/in-Â°F @Temperature -22.0 - 86.0 Â°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	212 Â°C	414 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	215 Â°C @Thickness 3.20 mm	419 Â°F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	194 Â°C	381 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	200 Â°C @Thickness 3.20 mm	392 Â°F @Thickness 0.126 in	unannealed; ASTM D648

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