

SABIC Innovative Plastics LNP LUBRICOMP DFI14 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

LNP* Lubricomp* DFI14 is a compound based on Polycarbonate resin containing 20% Glass Fiber and 2% Silicone. Added features include: Internally Lubricated.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-DFI14-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.33 g/cc	1.33 g/cc	ASTM D792
Density	1.33 g/cc	0.0480 lb/in ³	ASTM D792
Moisture Absorption	0.100 %	0.100 %	50% RH, 24 hrs; ASTM D570
	0.180 %	0.180 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm @Time 86400 sec	0.0030 - 0.0050 in/in @Time 24.0 hour	ASTM D955
Linear Mold Shrinkage, Transverse	0.0060 - 0.0080 cm/cm @Time 86400 sec	0.0060 - 0.0080 in/in @Time 24.0 hour	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	102 MPa	14800 psi	5 mm/min; ISO 527
	103 MPa	14900 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	103 MPa	14900 psi	5 mm/min; ISO 527
	104 MPa	15100 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	3.1 %	3.1 %	5 mm/min; ISO 527
	3.3 %	3.3 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	6.21 GPa	901 ksi	1 mm/min; ISO 527
	6.27 GPa	909 ksi	5 mm/min; ASTM D638
Flexural Strength	164 MPa	23800 psi	ISO 178
	171 MPa	24800 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Yield Strength	174 MPa	25200 psi	1.3 mm/min, 50 mm span; ASTM D790

Flexural Modulus Mechanical Properties	5.89 GPa Metric	854 ksi English	2 mm/min; ISO 178 Comments
	6.08 GPa	882 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.71 J/cm	3.20 ft-lb/in	ASTM D256
Izod Impact, Unnotched	7.52 J/cm	14.1 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	17.0 kJ/m ²	8.09 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	52.0 kJ/m ²	24.7 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	24.0 J @Temperature 23.0 °C	17.7 ft-lb @Temperature 73.4 °F	ASTM D3763
Impact Test	7.00 J	5.16 ft-lb	Multiaxial Impact; ISO 6603
Coefficient of Friction, Dynamic	0.43	0.43	ASTM D3702 Modified
Coefficient of Friction, Static	0.53	0.53	ASTM D3702 Modified
K (wear) Factor	8.06 x 10 ⁻⁸ mm ³ /N-M	4.00 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	Ring; ASTM D3702 Modified
	556 x 10 ⁻⁸ mm ³ /N-M	276 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	Washer; ASTM D3702 Modified

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	56.0 µm/m-°C @Temperature -30.0 - 30.0 °C	31.1 µin/in-°F @Temperature -22.0 - 86.0 °F	ASTM D696
CTE, linear, Transverse to Flow	69.0 µm/m-°C @Temperature -30.0 - 30.0 °C	38.3 µin/in-°F @Temperature -22.0 - 86.0 °F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	144 °C	291 °F	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	145 °C @Thickness 3.20 mm	293 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	140 °C	284 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	141 °C @Thickness 3.20 mm	286 °F @Thickness 0.126 in	unannealed; ASTM D648

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