

SABIC Innovative Plastics LNP Thermocomp IF006S PA6.12

Category : Polymer , Thermoplastic , Nylon , Nylon 612

Material Notes:

LNP* Thermocomp* IF006S is a compound based on Nylon 6/12 resin containing Glass Fiber. Added features of this material include: Heat Stabilized. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-IF006S-PA612.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 lb/in ³	ISO 1183
	1.32 g/cc	0.0477 lb/in ³	ASTM D 792
Moisture Absorption at Equilibrium	0.10 %	0.10 %	50% RH; ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0011 - 0.0016 cm/cm	0.0011 - 0.0016 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
	0.0010 - 0.0020 cm/cm	0.0010 - 0.0020 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0066 - 0.0071 cm/cm	0.0066 - 0.0071 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
	0.0070 - 0.0080 cm/cm	0.0070 - 0.0080 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	178 MPa	25800 psi	ISO 527
	182 MPa	26400 psi	ASTM D 638
Elongation at Break	3.4 %	3.4 %	ISO 527
	3.7 %	3.7 %	ASTM D 638
Tensile Modulus	9.58 GPa	1390 ksi	50 mm/min; ASTM D 638
	10.32 GPa	1497 ksi	1 mm/min; ISO 527
Flexural Strength	250 MPa	36300 psi	ISO 178
	289 MPa	41900 psi	ASTM D 790
Flexural Modulus	8.83 GPa	1280 ksi	ISO 178

Mechanical Properties	Metric 9.30 GPa	English 1330 ksi	Comments ASTM D 790
Izod Impact, Notched	1.38 J/cm @Temperature 23.0 °C	2.59 ft-lb/in @Temperature 73.4 °F	ASTM D 256
Izod Impact, Unnotched	12.28 J/cm @Temperature 23.0 °C	23.01 ft-lb/in @Temperature 73.4 °F	ASTM D 4812
Izod Impact, Notched (ISO)	14.0 kJ/m ² @Temperature 23.0 °C	6.66 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	78.0 kJ/m ² @Temperature 23.0 °C	37.1 ft-lb/in ² @Temperature 73.4 °F	80*10*4; ISO 180/1U
Impact Test	3.00 J	2.21 ft-lb	Multiaxial Impact; ISO 6603
	14.0 J @Temperature 23.0 °C	10.3 ft-lb @Temperature 73.4 °F	Instrumented Impact Energy @ peak; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.5 µm/m-°C @Temperature -40.0 - 40.0 °C	22.5 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
	41.4 µm/m-°C @Temperature -40.0 - 40.0 °C	23.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
CTE, linear, Transverse to Flow	73.1 µm/m-°C @Temperature -40.0 - 40.0 °C	40.6 µin/in-°F @Temperature -40.0 - 104 °F	ISO 11359-2
	73.8 µm/m-°C @Temperature -40.0 - 40.0 °C	41.0 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	213 °C @Thickness 3.20 mm	415 °F @Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	198 °C @Thickness 3.20 mm	388 °F @Thickness 0.126 in	unannealed; ASTM D 648

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