

SABIC Innovative Plastics LNP Thermocomp SF006S PA 12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

LNP* Thermocomp* SF006S is a compound based on Nylon 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-SF006S-PA-12.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ASTM D 792
	1.24 g/cc	0.0448 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.10 %	0.10 %	50% RH; ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0020 - 0.0030 cm/cm	0.0020 - 0.0030 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
	0.0021 - 0.0030 cm/cm	0.0021 - 0.0030 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0070 - 0.0080 cm/cm	0.0070 - 0.0080 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
	0.0074 - 0.0081 cm/cm	0.0074 - 0.0081 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	106 MPa	15400 psi	ASTM D 638
	108 MPa	15700 psi	ISO 527
Elongation at Break	4.6 %	4.6 %	ISO 527
	4.7 %	4.7 %	ASTM D 638
Tensile Modulus	6.55 GPa	950 ksi	50 mm/min; ASTM D 638
	6.58 GPa	954 ksi	1 mm/min; ISO 527
Flexural Strength	165 MPa	23900 psi	ASTM D 790
	169 MPa	24500 psi	ISO 178
Flexural Modulus	5.86 GPa	850 ksi	ASTM D 790

Mechanical Properties	Metric	English	Comments
	0.24 GPa	350 ksi	ISO 178
Izod Impact, Notched	1.49 J/cm @Temperature 23.0 Â°C	2.79 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	9.61 J/cm @Temperature 23.0 Â°C	18.0 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	15.0 kJ/mÂ² @Temperature 23.0 Â°C	7.14 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	58.0 kJ/mÂ² @Temperature 23.0 Â°C	27.6 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	4.00 J	2.95 ft-lb	Multiaxial Impact; ISO 6603
	13.0 J @Temperature 23.0 Â°C	9.59 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Energy @ peak; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	43.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	24.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	43.7 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	24.3 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	113 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	62.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	113 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	62.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	162 Â°C	324 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	163 Â°C @Thickness 3.20 mm	325 Â°F @Thickness 0.126 in	unannealed; ASTM D 648

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