

SABIC Innovative Plastics LNP THERMOCOMP DF002ERJ PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

LNP THERMOCOMP® DF002ERJ is a compound based on Polycarbonate resin containing Glass Fiber. Added features of this material include: Easy Molding, Healthcare.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-DF002ERJ-PC.php

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in ³	ISO 1183
	1.275 g/cc	0.04606 lb/in ³	ASTM D792
Moisture Absorption	0.150 %	0.150 %	50% RH, 24 hrs; ASTM D570
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0043 cm/cm	0.0043 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0051 cm/cm	0.0051 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	83.0 MPa	12000 psi	ASTM D638
	84.0 MPa	12200 psi	ISO 527
Elongation at Break	3.6 %	3.6 %	ISO 527
	3.8 %	3.8 %	ASTM D638
Tensile Modulus	4.10 GPa	595 ksi	1 mm/min; ISO 527
	4.17 GPa	605 ksi	50 mm/min; ASTM D638
Flexural Strength	117 MPa	17000 psi	ISO 178
	149 MPa	21600 psi	ASTM D790
Flexural Modulus	3.92 GPa	569 ksi	ISO 178

Mechanical Properties	4.28 GPa Metric	621 ksi English	ASTM D790 Comments
Izod Impact, Notched	0.970 J/cm	1.82 ft-lb/in	ASTM D256
Izod Impact, Unnotched	9.29 J/cm	17.4 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	8.00 kJ/m ²	3.81 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	61.0 kJ/m ²	29.0 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	13.0 J	9.59 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	9.00 J	6.64 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	38.1 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$	21.2 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	38.2 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$	21.2 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	53.4 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$	29.7 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	53.5 $\mu\text{m/m}\cdot\text{Å}^\circ\text{C}$	29.7 $\mu\text{in/in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	141 $\text{Å}^\circ\text{C}$	286 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	137 $\text{Å}^\circ\text{C}$	279 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	136 $\text{Å}^\circ\text{C}$	277 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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