

SABIC Innovative Plastics LNP THERMOCOMP DB0049F PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

LNP* THERMOCOMP* DB0049F is a compound based on Polycarbonate resin containing 20% Glass Bead. Added features of this material include: Flame Retardant, Superior Molding.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-DB0049F-PC.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in ³	ASTM D792
	1.41 g/cc	0.0509 lb/in ³	ISO 1183
Moisture Absorption	0.100 %	0.100 %	50% RH, 24 hrs; ASTM D570
Linear Mold Shrinkage, Flow	0.0059 cm/cm	0.0059 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0060 - 0.0080 cm/cm	0.0060 - 0.0080 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0071 cm/cm	0.0071 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	37.0 MPa	5370 psi	ASTM D638
	38.0 MPa	5510 psi	ISO 527
Tensile Strength, Yield	44.0 MPa	6380 psi	ASTM D638
	45.0 MPa	6530 psi	ISO 527
Elongation at Break	20 %	20 %	ASTM D638
	22.4 %	22.4 %	ISO 527
Elongation at Yield	4.4 %	4.4 %	ISO 527
	4.6 %	4.6 %	ASTM D638
Tensile Modulus	3.12 GPa	453 ksi	1 mm/min; ISO 527

Mechanical Properties	3.44 GPa Metric	499 ksi English	50 mm/min; ASTM D638 Comments
Flexural Strength	83.0 MPa	12000 psi	ISO 178
Flexural Modulus	3.00 GPa	435 ksi	ISO 178
	3.44 GPa	499 ksi	ASTM D790
Izod Impact, Notched	0.900 J/cm	1.69 ft-lb/in	ASTM D256
Izod Impact, Unnotched	9.66 J/cm	18.1 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)	67.0 kJ/m ²	31.9 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	3.00 J	2.21 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	10.0 J	7.38 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	59.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	32.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	59.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	33.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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	59.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	33.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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)	60.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	33.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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)	136 $\text{Å}^\circ\text{C}$	277 $\text{Å}^\circ\text{F}$	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)	126 $\text{Å}^\circ\text{C}$	259 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	@Thickness 3.20 mm	@Thickness 0.126 in	
	125 $\text{Å}^\circ\text{C}$	257 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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