

SABIC Innovative Plastics LNP THERMOCOMP TH0300A PUR

Category : Polymer , Thermoplastic , Polyurethane, TP

Material Notes:

LNP THERMOCOMP* TH0300A is a compound based on Polyurethane resin. Added features of this material include: High Specific Gravity.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-TH0300A-PUR.php

Physical Properties	Metric	English	Comments
Density	2.999 g/cc	0.1083 lb/in ³	ASTM D792
	3.19 g/cc	0.115 lb/in ³	ISO 1183
Moisture Absorption	0.250 %	0.250 %	50% RH, 24 hrs; ASTM D570
	0.390 %	0.390 %	23°C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.012 cm/cm	0.012 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
	0.012 cm/cm	0.012 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.010 cm/cm	0.010 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
	0.0102 cm/cm	0.0102 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	13.0 MPa	1890 psi	ASTM D638
	28.0 MPa	4060 psi	ISO 527
Elongation at Break	225.9 %	225.9 %	ASTM D638
Elongation at Yield	15 %	15 %	ISO 527
	53.3 %	53.3 %	ASTM D638
Tensile Modulus	0.230 GPa	33.4 ksi	50 mm/min; ASTM D638
	0.390 GPa	56.6 ksi	1 mm/min; ISO 527
Flexural Strength	10.0 MPa	1450 psi	ISO 178
	12.0 MPa	1740 psi	ASTM D790

Mechanical Properties	Metric	English	Comments
	0.400 GPa	58.0 ksi	ISO 178
Izod Impact, Notched	5.17 J/cm	9.69 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
Izod Impact, Notched (ISO)	32.0 kJ/m ²	15.2 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
Dart Drop, Total Energy	27.0 J	19.9 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	29.0 J	21.4 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	115 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	115 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	63.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	132 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	73.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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)	133 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	73.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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)	57.0 $\text{Å}^\circ\text{C}$	135 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	55.0 $\text{Å}^\circ\text{C}$	131 $\text{Å}^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	35.0 $\text{Å}^\circ\text{C}$	95.0 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Af
	38.0 $\text{Å}^\circ\text{C}$	100 $\text{Å}^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648

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