

SABIC Innovative Plastics LNP THERMOCOMP TH0600A PUR

Category : Polymer , Thermoplastic , Polyurethane, TP

Material Notes:

LNP THERMOCOMP* TH0600A 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-TH0600A-PUR.php

Physical Properties	Metric	English	Comments
Density	6.03 g/cc	0.218 lb/in ³	ISO 1183
	6.046 g/cc	0.2184 lb/in ³	ASTM D792
Moisture Absorption	0.100 %	0.100 %	50% RH, 24 hrs; ASTM D570
	0.180 %	0.180 %	23 ^o C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.0096 cm/cm	0.0096 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
	0.010 cm/cm	0.010 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0076 cm/cm	0.0076 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
	0.0080 cm/cm	0.0080 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	14.0 MPa	2030 psi	ISO 527
	17.0 MPa	2470 psi	ASTM D638
Tensile Strength, Yield	17.0 MPa	2470 psi	ISO 527
	19.0 MPa	2760 psi	ASTM D638
Elongation at Break	25.8 %	25.8 %	ASTM D638
	52.1 %	52.1 %	ISO 527
Elongation at Yield	11.3 %	11.3 %	ISO 527
	14.4 %	14.4 %	ASTM D638
Tensile Modulus	0.920 GPa	133 ksi	1 mm/min; ISO 527

Mechanical Properties	1.10 GPa Metric	160 ksi English	50 mm/min; ASTM D638 Comments
Flexural Strength	18.0 MPa	2610 psi	ISO 178
	22.0 MPa	3190 psi	ASTM D790
Flexural Modulus	0.960 GPa	139 ksi	ISO 178
	0.980 GPa	142 ksi	ASTM D790
Izod Impact, Notched	2.99 J/cm	5.60 ft-lb/in	ASTM D256
Izod Impact, Unnotched	13.67 J/cm	25.61 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	18.0 kJ/m ²	8.57 ft-lb/in ²	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	85.0 kJ/m ²	40.4 ft-lb/in ²	80*10*4; ISO 180/1U
Dart Drop, Total Energy	16.0 J	11.8 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	12.0 J	8.85 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	95.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	95.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	52.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ISO 11359-2
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	88.9 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	49.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	88.9 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	49.4 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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 0.46 MPa (66 psi)	75.0 $\text{Å}^\circ\text{C}$	167 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	71.0 $\text{Å}^\circ\text{C}$	160 $\text{Å}^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	45.0 $\text{Å}^\circ\text{C}$	113 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	44.0 $\text{Å}^\circ\text{C}$	111 $\text{Å}^\circ\text{F}$	
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D648

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