

SABIC Innovative Plastics LNP THERMOCOMP TH0450A PUR (Asia Pacific)

Category : Polymer , Thermoplastic , Polyurethane, TP

Material Notes:

LNP THERMOCOMP* TH0450A 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-TH0450A-PUR-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Density	4.49 g/cc	0.162 lb/in ³	ISO 1183
	4.506 g/cc	0.1628 lb/in ³	ASTM D792
Moisture Absorption	0.110 %	0.110 %	50% RH, 24 hrs; ASTM D570
	0.310 %	0.310 %	23 ^o C / 50% RH; ISO 62
Linear Mold Shrinkage, Flow	0.010 cm/cm	0.010 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
	0.0104 cm/cm	0.0104 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0080 cm/cm	0.0080 in/in	ASTM D955
	@Time 86400 sec	@Time 24.0 hour	
	0.0081 cm/cm	0.0081 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	18.0 MPa	2610 psi	ISO 527
	19.0 MPa	2760 psi	ASTM D638
Tensile Strength, Yield	18.0 MPa	2610 psi	ISO 527
	20.0 MPa	2900 psi	ASTM D638
Elongation at Break	54.3 %	54.3 %	ISO 527
	78.6 %	78.6 %	ASTM D638
Elongation at Yield	26.6 %	26.6 %	ISO 527
	40.9 %	40.9 %	ASTM D638
Tensile Modulus	0.850 GPa	123 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 0.079 GPa	English 133 ksi	Comments 50 mm/min; ASTM D638
Flexural Strength	16.0 MPa	2320 psi	ISO 178
	18.0 MPa	2610 psi	ASTM D790
Flexural Modulus	0.660 GPa	95.7 ksi	ASTM D790
	0.760 GPa	110 ksi	ISO 178
Izod Impact, Notched	4.32 J/cm	8.09 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D4812
Izod Impact, Unnotched (ISO)	NB	NB	80*10*4; ISO 180/1U
Dart Drop, Total Energy	22.0 J	16.2 ft-lb	Instrumented Impact Energy @ peak; ASTM D3763
Impact Test	18.0 J	13.3 ft-lb	Multiaxial Impact; ISO 6603

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	95.5 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	53.1 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E 831
	@Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$	
	95.6 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	53.1 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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	90.5 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	50.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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)	90.5 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	50.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	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 0.46 MPa (66 psi)	68.0 $\text{Å}^\circ\text{C}$	154 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/Bf
	81.0 $\text{Å}^\circ\text{C}$	178 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	40.0 $\text{Å}^\circ\text{C}$	104 $\text{Å}^\circ\text{F}$	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	40.0 $\text{Å}^\circ\text{C}$	104 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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