

SABIC Innovative Plastics LNP Thermocomp TH0450D

Category : Polymer , Thermoplastic , Polyurethane, TP

Material Notes:

LNP* Thermocomp* TH0450D is a compound based on Polyurethane resin containing High Specific Gravity Filler. Added features of this material include: High Specific Gravity. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-TH0450D.php

Physical Properties	Metric	English	Comments
Density	4.50 g/cc	0.163 lb/in ³	ASTM D 792
	4.50 g/cc	0.163 lb/in ³	ISO 1183
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
	0.0064 cm/cm	0.0064 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.0067 cm/cm	0.0067 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
	0.0070 cm/cm	0.0070 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	21.0 MPa	3050 psi	ASTM D 638
	22.0 MPa	3190 psi	ISO 527
Tensile Strength, Yield	22.0 MPa	3190 psi	ASTM D 638
	22.0 MPa	3190 psi	ISO 527
Elongation at Break	52.8 %	52.8 %	ISO 527
	61.2 %	61.2 %	ASTM D 638
Elongation at Yield	44.7 %	44.7 %	ISO 527
	48 %	48 %	ASTM D 638
Tensile Modulus	0.900 GPa	131 ksi	1 mm/min; ISO 527
	1.18 GPa	171 ksi	50 mm/min; ASTM D 638

Flexural Strength Mechanical Properties	13.0 MPa Metric	1890 psi English	ASTM D 790 Comments
	19.0 MPa	2760 psi	ISO 178
Flexural Modulus	0.870 GPa	126 ksi	ASTM D 790
	0.870 GPa	126 ksi	ISO 178
Izod Impact, Notched	1.92 J/cm @Temperature 23.0 Â°C	3.60 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	21.84 J/cm @Temperature 23.0 Â°C	40.92 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	20.0 kJ/mÂ² @Temperature 23.0 Â°C	9.52 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	155 kJ/mÂ² @Temperature 23.0 Â°C	73.8 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	20.0 J	14.8 ft-lb	Multiaxial Impact; ISO 6603
	19.0 J @Temperature 23.0 Â°C	14.0 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Energy @ peak; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	88.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	49.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	89.1 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	49.5 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
CTE, linear, Transverse to Flow	82.8 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	46.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	84.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	46.8 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	43.0 Â°C	109 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/ Af

Thermal Properties	41.0 A °C Metric	106 A °F English	Comments ; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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