

SABIC Innovative Plastics LNP Thermotuf U1000AIS PPA

Category : Polymer , Thermoplastic , Polyphthalamide (PPA)

Material Notes:

LNP* Thermotuf* U1000AIS is a compound based on Polyphthalamide resin. Added features of this material include: High Impact, Heat Stabilized. 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-Thermotuf-U1000AIS-PPA.php

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183
	1.12 g/cc	0.0405 lb/in ³	ASTM D 792
Moisture Absorption at Equilibrium	0.20 %	0.20 %	50% RH; ASTM D 570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
	0.014 cm/cm	0.014 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Transverse	0.017 cm/cm	0.017 in/in	ASTM D 955
	@Time 86400 sec	@Time 24.0 hour	
	0.017 cm/cm	0.017 in/in	ISO 294
	@Time 86400 sec	@Time 24.0 hour	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	56.0 MPa	8120 psi	ISO 527
	58.0 MPa	8410 psi	ASTM D 638
Tensile Strength, Yield	56.0 MPa	8120 psi	ISO 527
	59.0 MPa	8560 psi	ASTM D 638
Elongation at Break	12.6 %	12.6 %	ISO 527
	17 %	17 %	ASTM D 638
Elongation at Yield	5.0 %	5.0 %	ASTM D 638
	7.3 %	7.3 %	ISO 527
Tensile Modulus	2.45 GPa	355 ksi	1 mm/min; ISO 527

Mechanical Properties	Metric 2.75 GPa	English 399 ksi	Comments 50 mm/min; ASTM D 638
Flexural Strength	79.0 MPa	11500 psi	ISO 178
Flexural Modulus	2.00 GPa	290 ksi	ISO 178
	2.06 GPa	299 ksi	ASTM D 790
Izod Impact, Notched	5.87 J/cm @Temperature 23.0 Â°C	11.0 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	19.22 J/cm @Temperature 23.0 Â°C	36.01 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	44.0 kJ/mÂ² @Temperature 23.0 Â°C	20.9 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	172 kJ/mÂ² @Temperature 23.0 Â°C	81.8 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	52.0 J	38.4 ft-lb	Multiaxial Impact; ISO 6603
	6.00 J @Temperature 23.0 Â°C	4.43 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Energy @ peak; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	79.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	43.9 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	79.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	44.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	80.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	44.4 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	81.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	45.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
Deflection Temperature at 0.46 MPa (66 psi)	153 Â°C	307 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/Bf

Thermal Properties	Metric	English	Comments
	@Thickness 3.20 mm	@Thickness 0.126 in	unannealed; ASTM D 648
Deflection Temperature at 1.8 MPa (264 psi)	108 Â°C	226 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	108 Â°C	226 Â°F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	

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