

## LNP\* Thermotuf\* Compound U1000AIS

Asia Pacific: COMMERCIAL

Also known as: U-1000 A HI HS  
Product Reorder Name: U1000AIS

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

### Property

TYPICAL PROPERTIES <sup>(1)</sup>			
MECHANICAL	Value	Unit	Standard
Tensile Stress, yield	59	MPa	ASTM D 638
Tensile Stress, break	58	MPa	ASTM D 638
Tensile Strain, yield	5	%	ASTM D 638
Tensile Strain, break	17	%	ASTM D 638
Tensile Modulus, 50 mm/min	2750	MPa	ASTM D 638
Flexural Modulus	2060	MPa	ASTM D 790
Tensile Stress, yield	56	MPa	ISO 527
Tensile Stress, break	56	MPa	ISO 527
Tensile Strain, yield	7.3	%	ISO 527
Tensile Strain, break	12.6	%	ISO 527
Tensile Modulus, 1 mm/min	2450	MPa	ISO 527
Flexural Stress	79	MPa	ISO 178
Flexural Modulus	2000	MPa	ISO 178
IMPACT	Value	Unit	Standard
Izod Impact, unnotched, 23°C	1922	J/m	ASTM D 4812
Izod Impact, notched, 23°C	587	J/m	ASTM D 256
Instrumented Impact Energy @ peak, 23°C	6	J	ASTM D 3763
Multiaxial Impact	52	J	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	172	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	44	kJ/m <sup>2</sup>	ISO 180/1A
THERMAL	Value	Unit	Standard
HDT, 0.45 MPa, 3.2 mm, unannealed	157	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	108	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.92E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.1E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.9E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	153	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	108	°C	ISO 75/Af
PHYSICAL	Value	Unit	Standard
Density	1.12	g/cm <sup>3</sup>	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.2	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs	1.4	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs	1.7	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs	1.4	%	ISO 294
Mold Shrinkage, xflow, 24 hrs	1.7	%	ISO 294

Density	1.11	g/cm <sup>3</sup>	ISO 1183
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Source GMD, last updated:09/24/2008

## Processing

Parameter	Value	Unit
Injection Molding		
Drying Temperature	120	°C
Drying Time	4	hrs
Maximum Moisture Content	0.15	%
Melt Temperature	315 - 330	°C
Front - Zone 3 Temperature	325 - 340	°C
Middle - Zone 2 Temperature	315 - 325	°C
Rear - Zone 1 Temperature	310 - 320	°C
Mold Temperature	150 - 170	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

Source GMD, last updated:09/24/2008

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

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