LNP™ THERMOTUF™ Compound V1000

Americas: COMMERCIAL

Also known as: LNP™ THERMOTUF™ Compound V-1000
Product reorder name: V1000

LNP THERMOTUF™ V1000 is a compound based on unfilled Super Tough Nylon resin. Added feature of this material is: High Impact.

TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yield	450	kgf/cm²	ASTM D 638
Tensile Stress, break	510	kgf/cm²	ASTM D 638
Tensile Strain, yield	4.6	%	ASTM D 638
Tensile Strain, break	60.3	%	ASTM D 638
Tensile Modulus, 50 mm/min	19600	kgf/cm²	ASTM D 638
Flexural Stress	760	kgf/cm²	ASTM D 790
Flexural Modulus	19600	kgf/cm²	ASTM D 790
Tensile Stress, yield	44	MPa	ISO 527
Tensile Stress, break	50	MPa	ISO 527
Tensile Strain, yield	17.1	%	ISO 527
Tensile Strain, break	168.1	%	ISO 527
Tensile Modulus, 1 mm/min	1800	MPa	ISO 527
Flexural Stress	64	MPa	ISO 178
Flexural Modulus	1700	MPa	ISO 178
IMPACT			
Instrumented Impact Energy @ peak, 23°C	580	cm-kgf	ASTM D 3763
Multiaxial Impact	788	cm-kgf	ISO 6603
Izod Impact, unnotched 80*10*4 +23°C	137	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	84	kJ/m²	ISO 180/1A
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	53	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.27E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	1.26E-04	1/°C	ASTM E 831

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TYPICAL PROPERTIES[1]	TYPICAL VALUE	Unit	Standard
THERMAL			
CTE, -40°C to 40°C, flow	1.27E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.26E-04	1/°C	ISO 11359-2
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	56	°C	ISO 75/Af
PHYSICAL			
Density	1.073	g/cm³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.8	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	1.3 - 1.5	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1.3 - 1.5	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	1.3 - 1.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	1.3 - 1.5	%	ISO 294
Density	1.07	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.37	%	ISO 62

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Maximum Moisture Content	0.15 - 0.25	%
Melt Temperature	270 - 295	°C
Front - Zone 3 Temperature	290 - 300	°C
Middle - Zone 2 Temperature	270 - 280	°C
Rear - Zone 1 Temperature	260 - 270	°C
Mold Temperature	50 - 95	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	10 - 60	rpm