



LNP™ THERMOTUF™ Compound VF1001S

Americas: COMMERCIAL

Also known as: LNP™ THERMOTUF™ Compound VF-1001 HS

Product reorder name: VF1001S

LNP THERMOTUF VF1001S is a compound based on Super Tough Nylon resin containing 5% Glass Fiber. Added features of this material include: Heat Stabilized, High Impact.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	630	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	570	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3.4	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	9.3	%	ASTM D 638
Tensile Modulus, 50 mm/min	34500	kgf/cm ²	ASTM D 638
Flexural Modulus, 1.3 mm/min, 50 mm span	29900	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	61	MPa	ISO 527
Tensile Stress, break, 5 mm/min	56	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3.4	%	ISO 527
Tensile Strain, break, 5 mm/min	7.6	%	ISO 527
Tensile Modulus, 1 mm/min	3290	MPa	ISO 527
Flexural Stress	86	MPa	ISO 178
Flexural Modulus, 2 mm/min	2760	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	73	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	10	cm-kgf/cm	ASTM D 256
Multiaxial Impact	121	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	90	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	41	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	9	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	249	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	198	°C	ASTM D 648



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
CTE, -30°C to 30°C, flow	6.37E+01	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	9.79E+01	1/°C	ASTM D 696
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	242	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	154	°C	ISO 75/Af
PHYSICAL			
Density	1.12	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.68	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	1 - 3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1 - 3	%	ASTM D 955
Density	1.12	g/cm ³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.1	%	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