



LNP™ THERMOTUF™ Compound VF004S

Americas: COMMERCIAL

Also known as: LNP™ THERMOTUF™ Compound VF-1004 HS

Product reorder name: VF004S

LNP THERMOTUF™ VF004S is a compound based on Super Tough Nylon resin containing 20% Glass Fiber. Added features of this material include: Heat Stabilized.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	1040	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.8	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Modulus, 50 mm/min	66000	kgf/cm ²	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	1590	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	57300	kgf/cm ²	ASTM D 790
Tensile Stress, break, 5 mm/min	97	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.6	%	ISO 527
Tensile Strain, break, 5 mm/min	3	%	ISO 527
Tensile Modulus, 1 mm/min	6210	MPa	ISO 527
Flexural Modulus, 2 mm/min	5080	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	71	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	13	cm-kgf/cm	ASTM D 256
Multiaxial Impact	62	cm-kgf	ISO 6603
Instrumented Impact Total Energy, 23°C	225	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*4 +23°C	42	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	12	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	256	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	240	°C	ASTM D 648
CTE, -30°C to 30°C, flow	2.99E+01	1/°C	ASTM D 696
CTE, -30°C to 30°C, xflow	8.12E+01	1/°C	ASTM D 696



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THERMAL			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	235	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	235	°C	ISO 75/Af
PHYSICAL			
Density	1.23	g/cm ³	ASTM D 792
Moisture Absorption, 50% RH, 24 hrs	0.74	%	ASTM D 570
Mold Shrinkage, flow, 24 hrs (5)	0.4 - 0.6	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	0.8 - 1	%	ASTM D 955
Density	1.23	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	%
Melt Temperature	280 - 295	°C
Front - Zone 3 Temperature	295 - 305	°C
Middle - Zone 2 Temperature	275 - 290	°C
Rear - Zone 1 Temperature	260 - 270	°C
Mold Temperature	95 - 110	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm