



LNP™ THERMOTUF™ Compound MF004AI

Americas: COMMERCIAL

Also known as: LNP™ THERMOTUF™ Compound MF-1004 HI

Product reorder name: MF004AI

LNP THERMOTUF MF004AI is a compound based on Polypropylene resin containing 20% Glass Fiber. Added features of this material include: High Impact.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, break	400	kgf/cm ²	ASTM D 638
Tensile Strain, break	4.8	%	ASTM D 638
Tensile Modulus, 50 mm/min	49200	kgf/cm ²	ASTM D 638
Flexural Stress	420	kgf/cm ²	ASTM D 790
Flexural Modulus	28100	kgf/cm ²	ASTM D 790
Tensile Stress, break	37	MPa	ISO 527
Tensile Strain, break	4.5	%	ISO 527
Tensile Modulus, 1 mm/min	4940	MPa	ISO 527
Flexural Stress	46	MPa	ISO 178
Flexural Modulus	3000	MPa	ISO 178
IMPACT			
Izod Impact, unnotched, 23°C	44	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	17	cm-kgf/cm	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	28	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	14	kJ/m ²	ISO 180/1A
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	150	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	108	°C	ASTM D 648
CTE, -40°C to 40°C, flow	1.06E-04	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	6.84E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	1.05E-04	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	6.8E-05	1/°C	ISO 11359-2
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	144	°C	ISO 75/Bf

(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.

(5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	104	°C	ISO 75/Af
PHYSICAL			
Density	1.03	g/cm ³	ASTM D 792
Mold Shrinkage, flow, 24 hrs (5)	1.1 - 1.3	%	ASTM D 955
Mold Shrinkage, xflow, 24 hrs (5)	1.1 - 1.3	%	ASTM D 955
Mold Shrinkage, flow, 24 hrs (5)	1.2	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (5)	1.2	%	ISO 294
Density	1.03	g/cm ³	ISO 1183

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(6) Needs hard coat to consistently pass 60 sec Vertical Burn.

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
Drying Temperature	80	°C
Drying Time	4	hrs
Melt Temperature	225 - 250	°C
Front - Zone 3 Temperature	240 - 250	°C
Middle - Zone 2 Temperature	215 - 225	°C
Rear - Zone 1 Temperature	195 - 205	°C
Mold Temperature	30 - 50	°C
Back Pressure	0.2 - 0.3	MPa
Screw Speed	30 - 60	rpm

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