LNP™ THERMOTUF™ Compound MF004AI

MF-1004 HI

DESCRIPTION

LNP THERMOTUF MF004AI compound is based on Polypropylene (PP) resin containing 20% glass fiber. Added features of this grade include: Impact Modified.

GENERAL INFORMATION	
Features	High stiffness/Strength, Impact resistant, No PFAS intentionally added
Fillers	Glass Fiber (Total fluorine >50ppm only from inorganic fluorine)
Polymer Types	Polypropylene, Unspecified (PP, Unspecified)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Consumer	Sport/Leisure, Personal Accessory
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20231109

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
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
Tensile Stress, break	39	MPa	ASTM D638
Tensile Strain, break	4.8	%	ASTM D638
Tensile Modulus, 50 mm/min	4820	MPa	ASTM D638
Flexural Stress	41	MPa	ASTM D790
Flexural Modulus	2750	MPa	ASTM D790
IMPACT [1]			
Izod Impact, notched 80*10*4 +23°C	14	kJ/m²	ISO 180/1A
Izod Impact, unnotched 80*10*4 +23°C	28	kJ/m²	ISO 180/1U
Izod Impact, notched, 23°C	170	J/m	ASTM D256
Izod Impact, unnotched, 23°C	437	J/m	ASTM D4812
THERMAL [1]			
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	144	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	104	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	6.80E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	1.05E-04	1/°C	ISO 11359-2
HDT, 0.45 MPa, 3.2 mm, unannealed	150	°C	ASTM D648

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT, 1.82 MPa, 3.2mm, unannealed	108	°C	ASTM D648
CTE, -40°C to 40°C, flow	6.84E-05	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.06E-04	1/°C	ASTM E831
PHYSICAL [1]			
Density	1.03	g/cm³	ISO 1183
Mold Shrinkage, flow, 24 hrs [2]	1.2	%	ISO 294
Mold Shrinkage, xflow, 24 hrs [2]	1.2	%	ISO 294
Density	1.03	g/cm³	ASTM D792
Mold Shrinkage, flow, 24 hrs [2]	1.1 – 1.3	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs [2]	1.1 – 1.3	%	ASTM D955
INJECTION MOLDING [3]			
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	

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) 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.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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