LNP™ THERMOTUF™ COMPOUND V1000

V-1000

DESCRIPTION

LNP THERMOTUF V1000 compound is based on unfilled Super Tough Nylon resin. Added features of this grade include: Impact Modified.

GENERAL INFORMATION	
Features	Impact resistant, No PFAS intentionally added
Fillers	Unreinforced
Polymer Types	Polyamide 66 (Nylon 66)
Processing Techniques	Injection Molding

INDUSTRY	SUB INDUSTRY
Building and Construction	Building Component
Consumer	Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance
Electrical and Electronics	Mobile Phone - Computer - Tablets
Industrial	Electrical

TYPICAL PROPERTY VALUES

Revision 20230607

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL [1]			
Tensile Stress, yield	45	MPa	ASTM D638
Tensile Stress, break	50	MPa	ASTM D638
Tensile Strain, yield	4.6	%	ASTM D638
Tensile Strain, break	60.3	%	ASTM D638
Tensile Modulus, 50 mm/min	1930	MPa	ASTM D638
Flexural Stress	74	MPa	ASTM D790
Flexural Modulus	1930	MPa	ASTM D790
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 [1]			
Instrumented Dart Impact Energy @ peak, 23°C	56	J	ASTM D3763
Multiaxial Impact	77	J	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 [1]			
HDT, 1.82 MPa, 3.2mm, unannealed	53	°C	ASTM D648

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
CTE, -40°C to 40°C, flow	1.27E-04	1/°C	ASTM E831
CTE, -40°C to 40°C, xflow	1.26E-04	1/°C	ASTM E831
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
Relative Temp Index, Elec (2)	110	°C	UL 746B
Relative Temp Index, Mech w/impact (2)	75	°C	UL 746B
Relative Temp Index, Mech w/o impact (2)	85	°C	UL 746B
PHYSICAL (1)			
Density	1.073	g/cm³	ASTM D792
Moisture Absorption, (23°C/50% RH/24 hrs)	0.8	%	ASTM D570
Mold Shrinkage, flow, 24 hrs (3)	1.3 – 1.5	%	ASTM D955
Mold Shrinkage, xflow, 24 hrs (3)	1.3 – 1.5	%	ASTM D955
Mold Shrinkage, flow, 24 hrs (3)	1.3 – 1.5	%	ISO 294
Mold Shrinkage, xflow, 24 hrs (3)	1.3 – 1.5	%	ISO 294
Density	1.07	g/cm³	ISO 1183
Moisture Absorption (23°C / 50% RH)	1.37	%	ISO 62
FLAME CHARACTERISTICS (2)			
UL Yellow Card Link	E121562-101282752	-	-
UL Yellow Card Link 2	E207780-101282736	-	-
UL Recognized, 94HB Flame Class Rating	≥0.75	mm	UL 94
INJECTION MOLDING (4)			
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	

(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) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.
(3) 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.
(4) 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.

MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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