

LNPTM THERMOTUFTM COMPOUND WF009N

DESCRIPTION

LNP THERMOTUF WF009N is a PBT based compound containing 45% glass fiber for nano-molding technology (NMT) application especially at low molding temperature. Added features include high metal bonding strength.

TYPICAL PROPERTY VALUES

Revision 20200521

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	168	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.2	%	ASTM D 638
Tensile Modulus, 5 mm/min	14500	MPa	ASTM D 638
Flexural Strength, 1.3 mm/min, 50 mm span	256	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	13200	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	163	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.1	%	ISO 527
Tensile Modulus, 1 mm/min	14100	MPa	ISO 527
Flexural Stress, break, 2 mm/min	259	MPa	ISO 178
Flexural Modulus, 2 mm/min	12300	MPa	ISO 178
Bonding strength (TRI) , 5 mm/min, Type A	40	MPa	ISO 19095
IMPACT			
Izod Impact, unnotched, 23°C	1050	J/m	ASTM D 4812
Izod Impact, notched, 23°C	153	J/m	ASTM D 256
Izod Impact, notched, -30°C	144	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	64	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	16	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	16	kJ/m ²	ISO 180/1A
Charpy Impact, unnotched, 23°C	72	kJ/m ²	ISO 179/2C
Charpy Impact, notched, 23°C	17	kJ/m ²	ISO 179/2C
Charpy Impact, notched, -30°C	16	kJ/m ²	ISO 179/2C
THERMAL			
Vicat Softening Temp, Rate B/50	212	°C	ASTM D 1525
HDT, 1.82 MPa, 6.4 mm, unannealed	215	°C	ASTM D 648
Vicat Softening Temp, Rate A/50	213	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	211	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	1.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	5.6E-05	1/°C	ASTM E 831
Relative Temp Index, Elec ⁽¹⁾	75	°C	UL 746B
Relative Temp Index, Mech w/impact ⁽¹⁾	75	°C	UL 746B
Relative Temp Index, Mech w/o impact ⁽¹⁾	75	°C	UL 746B
PHYSICAL			
Density	1.7	g/cm ³	ASTM D 792
Mold Shrinkage, flow	0.14	%	SABIC method
Mold Shrinkage, xflow	0.34	%	SABIC method

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Melt Volume Rate, MVR at 275°C/5 kg	29	cm ³ /10 min	ISO 1133
ELECTRICAL			
Dielectric Constant, 1.1 GHz	3.94	-	SABIC method
Dielectric Constant, 1.9 GHz	3.95	-	SABIC method
Dissipation Factor, 1.1 GHz	0.011	-	SABIC method
Dissipation Factor, 1.9 GHz	0.010	-	SABIC method
FLAME CHARACTERISTICS ⁽¹⁾			
UL Yellow Card Link	E207780-103351811	-	-
UL Recognized, 94HB Flame Class Rating	≥0.7	mm	UL 94
INJECTION MOLDING			
Drying Temperature	100 – 120	°C	
Drying Time	4 – 8	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	265 – 285	°C	
Nozzle Temperature	265 – 285	°C	
Front - Zone 3 Temperature	265 – 285	°C	
Middle - Zone 2 Temperature	260 – 280	°C	
Rear - Zone 1 Temperature	250 – 270	°C	
Mold Temperature	100 – 140	°C	

(1) 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.

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