LNP™ THERMOTUF™ COMPOUND WF006N

DESCRIPTION

30% glass fiber reinforced, high metal bonding strength, high flow, for NMT application

TYPICAL PROPERTY VALUES

Revision 20191217

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	110	MPa	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	110	MPa	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2.7	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.7	%	ASTM D 638
Tensile Modulus, 5 mm/min	7900	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	156	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	6600	MPa	ASTM D 790
Tensile Stress, yield, 5 mm/min	120	MPa	ISO 527
Tensile Stress, break, 5 mm/min	120	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	2.5	%	ISO 527
Tensile Strain, break, 5 mm/min	2.5	%	ISO 527
Tensile Modulus, 1 mm/min	8200	MPa	ISO 527
Flexural Stress, break, 2 mm/min	166	MPa	ISO 178
Flexural Modulus, 2 mm/min	7400	MPa	ISO 178
IMPACT			
Charpy Impact, unnotched, 23°C	62	kJ/m²	ISO 179/2C
Izod Impact, unnotched, 23°C	840	J/m	ASTM D 4812
Izod Impact, notched, 23°C	165	J/m	ASTM D 256
Izod Impact, notched, -30°C	124	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	52	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	14	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	11	kJ/m²	ISO 180/1A
Charpy Impact, notched, 23°C	15	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	12	kJ/m²	ISO 179/2C
THERMAL			
Vicat Softening Temp, Rate B/50	153	°C	ASTM D 1525
HDT, 1.82 MPa, 6.4 mm, unannealed	175	°C	ASTM D 648
CTE, -40°C to 40°C, flow	2.1E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.9E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	1.5E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, xflow	4.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	2.2E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	8.2E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, flow	1.6E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	1.E-04	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	157	°C	ISO 306

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PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	158	°C	ISO 75/Af
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	1.48	g/cm³	ASTM D 792
Mold Shrinkage, flow	0.12	%	SABIC method
Mold Shrinkage, xflow	0.28	%	SABIC method
Melt Volume Rate, MVR at 250°C/5.0 kg	8.5	cm³/10 min	ISO 1133
ELECTRICAL			
Volume Resistivity	1.05E+15	Ohm-cm	ASTM D 257
Dielectric Constant, 1.1 GHz	3.53	-	SABIC method
Dielectric Constant, 1.9 GHz	3.54	-	SABIC method
Dissipation Factor, 1.1 GHz	0.012	-	SABIC method
Dissipation Factor, 1.9 GHz	0.011	-	SABIC method
FLAME CHARACTERISTICS [1]			
UL Yellow Card Link	E207780-104047809	-	-
UL Recognized, 94HB Flame Class Rating	≥0.7	mm	UL 94
INJECTION MOLDING			
Drying Temperature	100 – 120	°C	
Drying Time	2 – 4	hrs	
Maximum Moisture Content	0.02	%	
Melt Temperature	250 – 270	°C	
Nozzle Temperature	255 – 275	°C	
Front - Zone 3 Temperature	250 – 270	°C	
Middle - Zone 2 Temperature	250 – 270	°C	
Rear - Zone 1 Temperature	240 – 260	°C	
Hopper Temperature	40 – 60	°C	
Mold Temperature	100 – 160	°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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