

LNP™ THERMOTUF™ WF008N compound

Polybutylene Terephthalate

SABIC Innovative Plastics Asia Pacific

Message:

40% glass fiber reinforced, high strength, high flow, for NMT application

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Features	High strength		
	High liquidity		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.61	g/cm ³	ASTM D792
Melt Volume-Flow Rate (MVR)			ISO 1133
250°C/5.0 kg	7.00	cm ³ /10min	ISO 1133
275°C/5.0 kg	11.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal method
Flow	0.27	%	Internal method
Transverse flow	0.80	%	Internal method
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	10600	MPa	ASTM D638
--	11000	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	126	MPa	ASTM D638
Yield	131	MPa	ISO 527-2/5
Fracture ³	126	MPa	ASTM D638
Fracture	131	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	2.9	%	ISO 527-2/5
Fracture ⁵	3.0	%	ASTM D638
Fracture	2.9	%	ISO 527-2/5
Flexural Modulus			
50.0mm span ⁶	9200	MPa	ASTM D790
-- ⁷	9700	MPa	ISO 178
Flexural Stress			
--	208	MPa	ISO 178
Fracture, 50.0mm span ⁸	194	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/2C
-30°C	13	kJ/m ²	ISO 179/2C
23°C	14	kJ/m ²	ISO 179/2C
Charpy Unnotched Impact Strength (23°C)	85	kJ/m ²	ISO 179/2U
Notched Izod Impact			
-30°C	130	J/m	ASTM D256
23°C	140	J/m	ASTM D256
-30°C ⁹	13	kJ/m ²	ISO 180/1A
23°C ¹⁰	14	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	1100	J/m	ASTM D4812
23°C ¹¹	69	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	207	°C	ASTM D648
1.8 MPa, unannealed, 6.40mm	209	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹²	203	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	205	°C	ASTM D1525 ¹³
--	203	°C	ISO 306/B50
Linear thermal expansion coefficient			
Flow: -40 to 40°C	1.0E-5	cm/cm/°C	ASTM E831
Flow: 23 to 80°C	1.4E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	1.8E-5	cm/cm/°C	ISO 11359-2
Flow: 23 to 80°C	1.1E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	8.9E-5	cm/cm/°C	ASTM E831
Lateral: 23 to 80°C	1.2E-4	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	9.2E-5	cm/cm/°C	ISO 11359-2
Lateral: 23 to 80°C	1.5E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	2.2E+15	ohms · cm	ASTM D257
Dielectric Constant			Internal method
1.10 GHz	3.65		Internal method
1.90 GHz	3.72		Internal method
Dissipation Factor			Internal method
1.10 GHz	0.013		Internal method
1.90 GHz	0.012		Internal method
Injection	Nominal Value	Unit	
Drying Temperature	100 - 120	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.020	%	

Hopper Temperature	40 - 60	°C
Rear Temperature	240 - 260	°C
Middle Temperature	250 - 270	°C
Front Temperature	250 - 270	°C
Nozzle Temperature	255 - 275	°C
Processing (Melt) Temp	250 - 270	°C
Mold Temperature	100 - 160	°C

NOTE

1.	5.0 mm/min
2.	Type 1, 5.0 mm/min
3.	Type 1, 5.0 mm/min
4.	Type 1, 5.0 mm/min
5.	Type 1, 5.0 mm/min
6.	1.3 mm/min
7.	2.0 mm/min
8.	1.3 mm/min
9.	80*10*4
10.	80*10*4
11.	80*10*4
12.	80*10*4 mm
13.	标准 B (120°C/h), 载荷2 (50N)

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