LNP™ THERMOTUF™ COMPOUND WF009NA

DESCRIPTION

45% glass fiber reinforced, high metal bonding strength, for nano-molding technology (NMT) application.

TYPICAL PROPERTY VALUES

Revision 20191217

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
MECHANICAL			
Tensile Stress, brk, Type I, 5 mm/min	178	MPa	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	2.1	%	ASTM D 638
Tensile Modulus, 5 mm/min	14900	MPa	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	268	MPa	ASTM D 790
Flexural Stress, brk, 1.3 mm/min, 50 mm span	263	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	13400	MPa	ASTM D 790
Tensile Stress, break, 5 mm/min	177	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2.2	%	ISO 527
Tensile Modulus, 1 mm/min	14950	MPa	ISO 527
Flexural Stress, break, 2 mm/min	275	MPa	ISO 178
Flexural Modulus, 2 mm/min	13400	MPa	ISO 178
Bonding strength (TRI) , 5 mm/min, Type A	40	MPa	ISO 19095
IMPACT			
Izod Impact, unnotched, 23°C	1140	J/m	ASTM D 4812
Izod Impact, notched, 23°C	146	J/m	ASTM D 256
Izod Impact, notched, -30°C	127	J/m	ASTM D 256
Izod Impact, unnotched 80*10*4 +23°C	54	kJ/m²	ISO 180/1U
Izod Impact, notched 80*10*4 +23°C	15	kJ/m²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	16	kJ/m²	ISO 180/1A
Charpy Impact, unnotched, 23°C	64	kJ/m²	ISO 179/2C
Charpy Impact, notched, 23°C	15	kJ/m²	ISO 179/2C
Charpy Impact, notched, -30°C	15	kJ/m²	ISO 179/2C
THERMAL			
Vicat Softening Temp, Rate B/50	214	°C	ASTM D 1525
HDT, 1.82 MPa, 6.4 mm, unannealed	216	°C	ASTM D 648
Vicat Softening Temp, Rate A/50	215	°C	ISO 306
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	213	°C	ISO 75/Af
CTE, -40°C to 40°C, flow	1.4E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	4.9E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	1.8E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	5.9E-05	1/°C	ISO 11359-2
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			

© 2019 Copyright by SABIC. All rights reserved

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
Density	1.7	g/cm³	ASTM D 792
Mold Shrinkage, flow	0.19	%	SABIC method
Mold Shrinkage, xflow	0.37	%	SABIC method
Melt Volume Rate, MVR at 275°C/5 kg	27	cm³/10 min	ISO 1133
ELECTRICAL			
Dielectric Constant, 1.1 GHz	3.95	-	SABIC method
Dielectric Constant, 1.9 GHz	4.01	-	SABIC method
Dissipation Factor, 1.1 GHz	0.0077	-	SABIC method
Dissipation Factor, 1.9 GHz	0.0077	-	SABIC method
FLAME CHARACTERISTICS (1)			
UL Yellow Card Link	E207780-103351822	-	-
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 – 295	°C	
Nozzle Temperature	265 – 295	°C	
Front - Zone 3 Temperature	265 – 295	°C	
Middle - Zone 2 Temperature	260 – 290	°C	
Rear - Zone 1 Temperature	250 – 275	°C	
Mold Temperature	120 – 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.

DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.

© 2019 Copyright by SABIC. All rights reserved