

LNP™ THERMOCOMP™ TF002 compound

Polyurethane
SABIC Innovative Plastics

Message:

LNP THERMOCOMP TF002 is a compound based on Polyurethane resin containing 10% Glass Fiber.
Also known as: LNP* THERMOCOMP* Compound TF-1002
Product reorder name: TF002

General Information			
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.31	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.60 to 0.80	%	
Across Flow : 24 hr	0.70 to 0.90	%	
Water Absorption			
24 hr, 50% RH	0.40	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.61	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	1460	MPa	ASTM D638
--	1270	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	42.0	MPa	ASTM D638
Yield	43.0	MPa	ISO 527-2/5
Break ³	38.0	MPa	ASTM D638
Break	40.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	33	%	ASTM D638
Yield	34	%	ISO 527-2/5
Break ⁵	53	%	ASTM D638
Break	55	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁶	908	MPa	ASTM D790
-- ⁷	958	MPa	ISO 178
Flexural Stress	26.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	330	J/m	ASTM D256
23°C ⁸	31	kJ/m ²	ISO 180/1A

Unnotched Izod Impact			
23°C	1200	J/m	ASTM D4812
23°C ⁹	130	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	29.0	J	ASTM D3763
--	24.0	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	152	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	148	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	67.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	61.0	°C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -30 to 30°C	8.9E-5	cm/cm/°C	
Transverse : -30 to 30°C	1.7E-4	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	93.0 to 104	°C	
Drying Time	2.0	hr	
Suggested Max Moisture	0.030	%	
Suggested Shot Size	40 to 80	%	
Rear Temperature	193 to 210	°C	
Middle Temperature	193 to 216	°C	
Front Temperature	199 to 221	°C	
Nozzle Temperature	204 to 227	°C	
Processing (Melt) Temp	210	°C	
Mold Temperature	16.0 to 43.0	°C	
Back Pressure	0.170 to 0.340	MPa	
Screw Speed	30 to 60	rpm	
NOTE			
1.	50 mm/min		
2.	Type I, 5.0 mm/min		
3.	Type I, 5.0 mm/min		
4.	Type I, 5.0 mm/min		
5.	Type I, 5.0 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	80*10*4		
9.	80*10*4		
10.	80*10*4 mm		
11.	80*10*4 mm		

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