

LNP™ THERMOCOMP™ AF003 compound

Acrylonitrile Butadiene Styrene

SABIC Innovative Plastics

Message:

LNP THERMOCOMP AF003 is a compound based on ABS resin containing 15% Glass Fiber.

Also known as: LNP* THERMOCOMP* Compound AF-1003

Product reorder name: AF003

General Information			
Filler / Reinforcement	Glass Fiber,15% Filler by Weight		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.40 to 0.60	%	
Across Flow : 24 hr	0.50 to 0.70	%	
Water Absorption			
24 hr, 50% RH	0.24	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.35	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	5350	MPa	ASTM D638
--	5160	MPa	ISO 527-2/1
Tensile Strength			
Break ²	70.0	MPa	ASTM D638
Break	69.0	MPa	ISO 527-2/5
Tensile Elongation			
Break	2.2	%	ASTM D638
Break ³	2.4	%	ASTM D638
Break	2.4	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁴	4900	MPa	ASTM D790
-- ⁵	4520	MPa	ISO 178
Flexural Stress			
--	103	MPa	ISO 178
Yield, 50.0 mm Span ⁶	112	MPa	ASTM D790
Break, 50.0 mm Span ⁷	108	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	80	J/m	ASTM D256
23°C ⁸	7.8	kJ/m ²	ISO 180/1A

Unnotched Izod Impact			
23°C	300	J/m	ASTM D4812
23°C ⁹	20	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	14.3	J	ASTM D3763
--	3.30	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	103	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	103	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	97.0	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	97.0	°C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -30 to 30°C	6.1E-5	cm/cm/°C	
Transverse : -30 to 30°C	6.8E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.050 to 0.10	%	
Rear Temperature	204 to 216	°C	
Middle Temperature	232 to 243	°C	
Front Temperature	266 to 277	°C	
Processing (Melt) Temp	260	°C	
Mold Temperature	71.1 to 82.2	°C	
Back Pressure	0.172 to 0.344	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.	1.3 mm/min		
5.	2.0 mm/min		
6.	1.3 mm/min		
7.	1.3 mm/min		
8.	80*10*4		
9.	80*10*4		
10.	80*10*4 mm		
11.	80*10*4 mm		

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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

