

LNP™ THERMOCOMP™ SF004S compound

Polyamide 12

SABIC Innovative Plastics

Message:

LNP THERMOCOMP SF004S is a compound based on Nylon 12 containing 20% glass fiber. Added feature of this material is: Heat Stabilized.

Also known as: LNP* THERMOCOMP* Compound SF-1004 HS

Product reorder name: SF004S

General Information			
Filler / Reinforcement	Glass Fiber,20% Filler by Weight		
Additive	Heat Stabilizer		
Features	Heat Stabilized		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.17	g/cm ³	ASTM D792
Molding Shrinkage			ASTM D955
Flow : 24 hr	0.10 to 0.30	%	
Across Flow : 24 hr	0.80 to 1.0	%	
Water Absorption			
24 hr, 50% RH	0.14	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.19	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	5410	MPa	ASTM D638
--	5210	MPa	ISO 527-2/1
Tensile Strength			
Break ²	86.0	MPa	ASTM D638
Break	80.0	MPa	ISO 527-2/5
Tensile Elongation			
Break ³	2.7	%	ASTM D638
Break	2.5	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁴	4600	MPa	ASTM D790
-- ⁵	4460	MPa	ISO 178
Flexural Stress			
--	116	MPa	ISO 178
Yield, 50.0 mm Span ⁶	131	MPa	ASTM D790
Break, 50.0 mm Span ⁷	104	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	87	J/m	ASTM D256

23°C ⁸	6.7	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	590	J/m	ASTM D4812
23°C ⁹	35	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Total Energy	11.6	J	ASTM D3763
--	4.02	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	176	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	170	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	166	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	158	°C	ISO 75-2/Af
CLTE			ASTM D696
Flow : -30 to 30°C	3.9E-5	cm/cm/°C	
Transverse : -30 to 30°C	1.1E-3	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	82.2	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.12 to 0.20	%	
Rear Temperature	216 to 227	°C	
Middle Temperature	221 to 232	°C	
Front Temperature	227 to 238	°C	
Processing (Melt) Temp	227 to 238	°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.	5.0 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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