

LNP™ THERMOCOMP™ 5C003 compound

Polyvinylidene Fluoride

SABIC Innovative Plastics

Message:

LNP THERMOCOMP* 5C003 is a compound based on Polyvinylidene Fluoride resin containing 15% Carbon Fiber. Added features of this material include: Electrically Conductive.
Also known as: LNP* THERMOCOMP* Compound FP-VC-1003
Product reorder name: 5C003

General Information			
Filler / Reinforcement	Carbon Fiber,15% Filler by Weight		
Features	Electrically Conductive		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.77	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow : 24 hr	0.30 to 0.50	%	ASTM D955
Across Flow : 24 hr	1.0 to 1.3	%	ASTM D955
Across Flow : 24 hr	1.2	%	ISO 294-4
Flow : 24 hr	0.36	%	ISO 294-4
Water Absorption			
24 hr, 50% RH	0.030	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.040	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	14300	MPa	ASTM D638
--	14500	MPa	ISO 527-2/1
Tensile Strength			
Break	78.5	MPa	ASTM D638
Break	67.0	MPa	ISO 527-2
Tensile Elongation			
Break	0.80	%	ASTM D638
Break	0.60	%	ISO 527-2
Flexural Modulus			
--	11800	MPa	ASTM D790
--	20900	MPa	ISO 178
Flexural Strength			
--	128	MPa	ASTM D790
--	147	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			

23°C	59	J/m	ASTM D256
23°C ²	6.0	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	200	J/m	ASTM D4812
23°C ³	15	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	11.4	J	ASTM D3763
--	3.01	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	166	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ⁴	165	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	159	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ⁵	156	°C	ISO 75-2/Af
CLTE			ASTM E831, ISO 11359-2
Flow : -40 to 40°C	3.1E-5	cm/cm/°C	
Transverse : -40 to 40°C	8.6E-5	cm/cm/°C	
Injection	Nominal Value	Unit	
Drying Temperature	120 to 150	°C	
Drying Time	4.0	hr	
Rear Temperature	190 to 210	°C	
Middle Temperature	210 to 225	°C	
Front Temperature	225 to 245	°C	
Processing (Melt) Temp	215 to 230	°C	
Mold Temperature	65.0 to 90.0	°C	
Back Pressure	0.170 to 0.340	MPa	
Screw Speed	30 to 60	rpm	
NOTE			
1.	50 mm/min		
2.	80*10*4		
3.	80*10*4		
4.	80*10*4 mm		
5.	80*10*4 mm		

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Recommended distributors for this material

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

