

LNP™ THERMOCOMP™ 2C004 compound

Ethylene Tetrafluoroethylene Copolymer

SABIC Innovative Plastics

Message:

LNP THERMOCOMP 2C004 is a compound based on ETFE resin containing 20% Carbon Fiber. Added features of this material include: Electrically Conductive.
Also known as: LNP* THERMOCOMP* Compound FP-EC-1004
Product reorder name: 2C004

General Information			
Filler / Reinforcement	Carbon fiber reinforced material, 20% filler by weight		
Features	Conductivity		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.75	g/cm ³	ASTM D792
--	1.74	g/cm ³	ISO 1183
Molding Shrinkage			
Flow: 24 hours	0.70	%	ASTM D955
Transverse flow: 24 hours	2.2	%	ASTM D955
Vertical flow direction: 24 hours	2.2	%	ISO 294-4
Flow direction: 24 hours	0.65	%	ISO 294-4
Water Absorption			
24 hr, 50% RH	0.090	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.12	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	13300	MPa	ASTM D638
--	12200	MPa	ISO 527-2/1
Tensile Strength			
Fracture	60.2	MPa	ASTM D638
Fracture	59.0	MPa	ISO 527-2
Tensile Elongation			
Fracture	2.5	%	ASTM D638
Fracture	2.0	%	ISO 527-2
Flexural Modulus			
--	10500	MPa	ASTM D790
--	10600	MPa	ISO 178
Flexural Strength			
--	107	MPa	ASTM D790
--	120	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	180	J/m	ASTM D256
23°C ²	15	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	590	J/m	ASTM D4812
23°C ³	37	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	14.0	J	ASTM D3763
--	6.00	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, unannealed, 3.20mm	253	°C	ASTM D648
0.45 MPa, unannealed, 64.0mm span ⁴	246	°C	ISO 75-2/Bf
1.8 MPa, unannealed, 3.20mm	209	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁵	187	°C	ISO 75-2/Af
Linear thermal expansion coefficient			
Flow: -40 to 40°C	2.5E-5	cm/cm/°C	ASTM E831
Flow: -40 to 40°C	2.6E-5	cm/cm/°C	ISO 11359-2
Lateral: -40 to 40°C	5.4E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	121 - 149	°C	
Drying Time	4.0	hr	
Rear Temperature	282 - 293	°C	
Middle Temperature	310 - 321	°C	
Front Temperature	332 - 343	°C	
Processing (Melt) Temp	316	°C	
Mold Temperature	93.3 - 121	°C	
Back Pressure	0.172 - 0.344	MPa	
Screw Speed	30 - 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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