

LNP™ THERMOCOMP™ LC003E compound

Polyetheretherketone
SABIC Innovative Plastics

Message:

LNP THERMOCOMP* LC003E is a compound based on Polyetheretherketone resin containing Carbon Fiber. Added features of this material include: Easy Molding.
Also known as: LNP* THERMOCOMP* Compound LC-1003 EM
Product reorder name: LC003E

General Information			
Filler / Reinforcement	Carbon fiber reinforced material		
Features	Good formability		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.33	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow: 24 hours	0.20 - 0.30	%	ASTM D955
Transverse flow: 24 hours	0.50 - 0.60	%	ASTM D955
Vertical flow direction: 24 hours	0.51 - 0.58	%	ISO 294-4
Flow direction: 24 hours	0.28 - 0.31	%	ISO 294-4
Water Absorption			
24 hr, 50% RH	0.070	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.13	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	11500	MPa	ASTM D638
--	10500	MPa	ISO 527-2/1
Tensile Strength			
Fracture	154	MPa	ASTM D638
Fracture	163	MPa	ISO 527-2
Tensile Elongation (Break)	1.8	%	ASTM D638, ISO 527-2
Flexural Modulus			
--	9510	MPa	ASTM D790
--	9850	MPa	ISO 178
Flexural Strength			
--	259	MPa	ASTM D790
--	263	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	37	J/m	ASTM D256
23°C ²	4.3	kJ/m ²	ISO 180/1A

Unnotched Izod Impact			
23°C	400	J/m	ASTM D4812
23°C ³	29	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	4.40	J	ASTM D3763
--	1.80	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	270	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ⁴	298	°C	ISO 75-2/Af
Linear thermal expansion coefficient			ASTM E831, ISO 11359-2
Flow: -40 to 40°C	5.2E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	5.4E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+3 - 1.0E+7	ohms	ASTM D257
Injection	Nominal Value	Unit	
Drying Temperature	121 - 149	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.10	%	
Rear Temperature	349 - 360	°C	
Middle Temperature	366 - 377	°C	
Front Temperature	382 - 393	°C	
Processing (Melt) Temp	382 - 388	°C	
Mold Temperature	138 - 166	°C	
Back Pressure	0.344 - 0.689	MPa	
Screw Speed	60 - 100	rpm	
NOTE			
1.	50 mm/min		
2.	80*10*4		
3.	80*10*4		
4.	80*10*4 mm		

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