

LNP™ THERMOCOMP™ EC005 compound

Polyether Imide

SABIC Innovative Plastics

Message:

LNP THERMOCOMP* EC005 is a compound based on Polyetherimide resin containing 25% Carbon Fiber. Added features of this material include: Electrically Conductive.

Also known as: LNP* THERMOCOMP* Compound EC-1005

Product reorder name: EC005

General Information			
Filler / Reinforcement	Carbon Fiber,25% Filler by Weight		
Features	Electrically Conductive		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.38	g/cm ³	ASTM D792
--	1.37	g/cm ³	ISO 1183, ASTM D792
Molding Shrinkage			
Flow : 24 hr	0.070 to 0.090	%	ASTM D955
Across Flow : 24 hr	0.50 to 0.70	%	ASTM D955
Across Flow : 24 hr	0.30 to 0.50	%	ISO 294-4
Flow : 24 hr	0.10 to 0.30	%	ISO 294-4
Water Absorption			
24 hr, 50% RH	0.17	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.27	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	18300	MPa	ASTM D638
--	18200	MPa	ISO 527-2/1
Tensile Strength			
Break ²	200	MPa	ASTM D638
Break	200	MPa	ISO 527-2/5
Tensile Elongation			
Break ³	1.4	%	ASTM D638
Break	1.4	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁴	16300	MPa	ASTM D790
-- ⁵	16200	MPa	ISO 178
Flexural Strength ⁶			ASTM D790
Yield, 50.0 mm Span	275	MPa	
Break, 50.0 mm Span	274	MPa	

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	45	J/m	ASTM D256
23°C ⁷	4.8	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	410	J/m	ASTM D4812
23°C ⁸	24	kJ/m ²	ISO 180/1U
Instrumented Dart Impact			
23°C, Energy at Peak Load	10.4	J	ASTM D3763
23°C, Total Energy	11.6	J	ASTM D3763
--	3.00	J	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	210	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ⁹	212	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	204	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹⁰	207	°C	ISO 75-2/Af
CLTE			
Flow : -30 to 30°C	2.1E-5	cm/cm/°C	ASTM D696
Flow : -40 to 40°C	1.9E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Transverse : -30 to 30°C	2.7E-5	cm/cm/°C	ASTM D696
Transverse : -40 to 40°C	2.7E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+2 to 1.0E+5	ohms	ASTM D257
Volume Resistivity	1.0E+2 to 1.0E+6	ohms · cm	ASTM D257
Injection	Nominal Value	Unit	
Drying Temperature	121 to 149	°C	
Drying Time	4.0 to 6.0	hr	
Suggested Max Moisture	0.020	%	
Rear Temperature	343 to 354	°C	
Middle Temperature	354 to 366	°C	
Front Temperature	366 to 377	°C	
Processing (Melt) Temp	360 to 366	°C	
Mold Temperature	121 to 149	°C	
Back Pressure	0.344 to 0.689	MPa	
Screw Speed	60 to 100	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.	80*10*4
8.	80*10*4
9.	80*10*4 mm
10.	80*10*4 mm

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Recommended distributors for this material

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