

LNP™ THERMOCOMP™ EC005R compound

Polyether Imide

SABIC Innovative Plastics

Message:

LNP THERMOCOMP EC005R is a compound based on Polyetherimide resin containing 25% Carbon Fiber. Added features include: Mold Release, Electrically Conductive.

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

Product reorder name: EC005R

General Information			
Filler / Reinforcement	Carbon Fiber,25% Filler by Weight		
Additive	Mold Release		
Features	Electrically Conductive		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.36	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			ASTM D955
Flow : 24 hr	1.0E-3 to 3.0E-3	%	
Across Flow : 24 hr	4.0E-3 to 6.0E-3	%	
Water Absorption			
24 hr, 50% RH	0.18	%	ASTM D570
Equilibrium, 23°C, 50% RH	0.18	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	42000	MPa	ASTM D638
--	22900	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	132	MPa	ASTM D638
Yield	83.0	MPa	ISO 527-2/5
Break ³	201	MPa	ASTM D638
Break	179	MPa	ISO 527-2/5
Tensile Strain			
Yield	0.0	%	ISO 527-2/5
Break ⁴	0.72	%	ASTM D638
Break	1.1	%	ISO 527-2/5
Flexural Modulus			
50.0 mm Span ⁵	19100	MPa	ASTM D790
-- ⁶	18600	MPa	ISO 178
Flexural Strength ⁷ (Break, 50.0 mm Span)	276	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			

23°C	64	J/m	ASTM D256
23°C ⁸	5.5	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	520	J/m	ASTM D4812
23°C ⁹	30	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed, 3.20 mm	214	°C	ASTM D648
0.45 MPa, Unannealed, 64.0 mm Span ¹⁰	217	°C	ISO 75-2/Bf
1.8 MPa, Unannealed, 3.20 mm	207	°C	ASTM D648
1.8 MPa, Unannealed, 64.0 mm Span ¹¹	210	°C	ISO 75-2/Af
CLTE			ASTM E831
Flow : -40 to 40°C	1.9E-5	cm/cm/°C	
Transverse : -40 to 40°C	2.4E-5	cm/cm/°C	
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.	Type I, 5.0 mm/min		
5.	1.3 mm/min		
6.	2.0 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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