

SABIC Innovative Plastics LNP Thermocomp EC002E PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

LNP THERMOCOMP® EC002E is a compound based on Polyetherimide resin containing Carbon Fiber. Added features of this material include: Easy Molding. This data was supplied by SABIC-IP for the Americas region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-EC002E-PEI.php

Physical Properties	Metric	English	Comments
Density	1.31 g/cc	0.0473 lb/in ³	ASTM D 792
	1.31 g/cc	0.0473 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.35 %	0.35 %	23°C / 50% RH; ISO 62
	0.30 % @Time 86400 sec	0.30 % @Time 24.0 hour	50% RH; ASTM D 570
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm @Time 86400 sec	0.0010 - 0.0030 in/in @Time 24.0 hour	ASTM D 955
	0.0010 - 0.0030 cm/cm @Time 86400 sec	0.0010 - 0.0030 in/in @Time 24.0 hour	ISO 294
Linear Mold Shrinkage, Transverse	0.0030 - 0.0050 cm/cm @Time 86400 sec	0.0030 - 0.0050 in/in @Time 24.0 hour	ASTM D 955
	0.0030 - 0.0050 cm/cm @Time 86400 sec	0.0030 - 0.0050 in/in @Time 24.0 hour	ISO 294

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	137 MPa	19900 psi	ISO 527
	161 MPa	23400 psi	ASTM D 638
Elongation at Break	1.2 %	1.2 %	ISO 527
	1.6 %	1.6 %	ASTM D 638
Tensile Modulus	11.65 GPa	1690 ksi	50 mm/min; ASTM D 638
	12.63 GPa	1832 ksi	1 mm/min; ISO 527
Flexural Strength	216 MPa	31300 psi	ISO 178
	241 MPa	35000 psi	ASTM D 790

Mechanical Properties	Metric	English	Comments
Flexural Modulus	10.31 GPa	1493 ksi	ISO 178
	10.8 GPa	1570 ksi	ASTM D 790
Izod Impact, Notched	0.530 J/cm @Temperature 23.0 Â°C	0.993 ft-lb/in @Temperature 73.4 Â°F	ASTM D 256
Izod Impact, Unnotched	4.27 J/cm @Temperature 23.0 Â°C	8.00 ft-lb/in @Temperature 73.4 Â°F	ASTM D 4812
Izod Impact, Notched (ISO)	5.00 kJ/mÂ² @Temperature 23.0 Â°C	2.38 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1A
Izod Impact, Unnotched (ISO)	28.0 kJ/mÂ² @Temperature 23.0 Â°C	13.3 ft-lb/inÂ² @Temperature 73.4 Â°F	80*10*4; ISO 180/1U
Impact Test	2.00 J	1.48 ft-lb	Multiaxial Impact; ISO 6603
	11.0 J @Temperature 23.0 Â°C	8.11 ft-lb @Temperature 73.4 Â°F	Instrumented Impact Energy @ peak; ASTM D 3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	33.3 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	18.5 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
	34.2 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	19.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
CTE, linear, Transverse to Flow	32.4 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	18.0 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ASTM E 831
	33.0 Âµm/m-Â°C @Temperature -40.0 - 40.0 Â°C	18.3 Âµin/in-Â°F @Temperature -40.0 - 104 Â°F	ISO 11359-2
Deflection Temperature at 1.8 MPa (264 psi)	207 Â°C	405 Â°F	Flatw 80*10*4 sp=64mm; ISO 75/ Af
	205 Â°C @Thickness 3.20 mm	401 Â°F @Thickness 0.126 in	unannealed; ASTM D 648

Electrical Properties	Metric	English	Comments
Surface Resistance	100 - 1.00e+6 ohm	100 - 1.00e+6 ohm	ASTM D 257

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