

SABIC Innovative Plastics LNP THERMOCOMP EC006 PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

Material Notes:

LNP THERMOCOMP* EC006 is a compound based on Polyetherimide resin containing 30% Carbon Fiber. Added features of this material include: Electrically Conductive.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-EC006-PEI.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|-----------------------|----------------------------|------------------------------------|
| Density | 1.38 g/cc | 0.0499 lb/in ³ | ISO 1183 |
| | 1.388 g/cc | 0.05014 lb/in ³ | ASTM D792 |
| Moisture Absorption | 0.190 % | 0.190 % | 50% RH, 24 hrs; ASTM D570 |
| | 0.280 % | 0.280 % | 23 ^o C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0010 cm/cm | 0.0010 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |
| | 0.0010 - 0.0030 cm/cm | 0.0010 - 0.0030 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.0039 cm/cm | 0.0039 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |
| | 0.0030 - 0.0050 cm/cm | 0.0030 - 0.0050 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|-----------|-----------|----------------------|
| Tensile Strength at Break | 183 MPa | 26500 psi | ISO 527 |
| | 196 MPa | 28400 psi | ASTM D638 |
| Elongation at Break | 1.1 % | 1.1 % | ISO 527 |
| | 1.3 % | 1.3 % | ASTM D638 |
| Tensile Modulus | 19.44 GPa | 2820 ksi | 50 mm/min; ASTM D638 |
| | 20.87 GPa | 3027 ksi | 1 mm/min; ISO 527 |
| Flexural Strength | 269 MPa | 39000 psi | ISO 178 |
| | 280 MPa | 40600 psi | ASTM D790 |

| Flexural Modulus Mechanical Properties | 17.93 GPa Metric | 2601 ksi English | ISO 178 Comments |
|---|---|--|--|
| | 18.17 GPa | 2635 ksi | ASTM D790 |
| Izod Impact, Notched | 0.420 J/cm | 0.787 ft-lb/in | ASTM D256 |
| Izod Impact, Unnotched | 3.73 J/cm | 6.99 ft-lb/in | ASTM D4812 |
| Izod Impact, Notched (ISO) | 5.00 kJ/m ² | 2.38 ft-lb/in ² | 80*10*4; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | 26.0 kJ/m ² | 12.4 ft-lb/in ² | 80*10*4; ISO 180/1U |
| Dart Drop, Total Energy | 7.00 J | 5.16 ft-lb | Instrumented Impact Energy @ peak; ASTM D3763 |
| Impact Test | 2.00 J | 1.48 ft-lb | Multiaxial Impact; ISO 6603 |
| Coefficient of Friction, Dynamic | 0.52 | 0.52 | ASTM D3702 Modified |
| Coefficient of Friction, Static | 0.48 | 0.48 | ASTM D3702 Modified |
| K (wear) Factor | 151 x 10 ⁻⁸ mm ³ /N-M | 75.0 x 10 ⁻¹⁰ in ³ - min/ft-lb-hr | Washer; ASTM D3702 Modified |

| Thermal Properties | Metric | English | Comments |
|--|----------------------------------|---------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow | 36.0 Åµm/m-Å°C | 20.0 Åµin/in-Å°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| | 36.4 Åµm/m-Å°C | 20.2 Åµin/in-Å°F | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| CTE, linear, Transverse to Flow | 21.6 Åµm/m-Å°C | 12.0 Åµin/in-Å°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| | 22.5 Åµm/m-Å°C | 12.5 Åµin/in-Å°F | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| Deflection Temperature at 1.8 MPa (264 psi) | 219 Å°C | 426 Å°F | Flatw 80*10*4 sp=64mm; ISO 75/Af |
| | 217 Å°C @Thickness 3.20 mm | 423 Å°F @Thickness 0.126 in | |

| Electrical Properties | Metric | English | Comments |
|-----------------------|-------------------|-------------------|-----------|
| Surface Resistance | 100 - 1.00e+6 ohm | 100 - 1.00e+6 ohm | ASTM D257 |

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