

SABIC Innovative Plastics LNP THERMOCOMP LC003E PEEK (Asia Pacific)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK)

Material Notes:

LNP THERMOCOMP* LC003E is a compound based on Polyetheretherketone resin containing Carbon Fiber. Added features of this material include: Easy Molding.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-LC003E-PEEK-Asia-Pacific.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|-----------------------|---------------------------|------------------------------------|
| Density | 1.33 g/cc | 0.0480 lb/in ³ | ASTM D792 |
| | 1.33 g/cc | 0.0480 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.0700 % | 0.0700 % | 50% RH, 24 hrs; ASTM D570 |
| | 0.130 % | 0.130 % | 23 ^o C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0020 - 0.0030 cm/cm | 0.0020 - 0.0030 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.0028 - 0.0031 cm/cm | 0.0028 - 0.0031 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.0051 - 0.0058 cm/cm | 0.0051 - 0.0058 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.0050 - 0.0060 cm/cm | 0.0050 - 0.0060 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|-----------|-----------|----------------------|
| Tensile Strength at Break | 153 MPa | 22200 psi | ASTM D638 |
| | 163 MPa | 23600 psi | ISO 527 |
| Elongation at Break | 1.8 % | 1.8 % | ASTM D638 |
| | 1.8 % | 1.8 % | ISO 527 |
| Tensile Modulus | 10.52 GPa | 1526 ksi | 1 mm/min; ISO 527 |
| | 11.51 GPa | 1669 ksi | 50 mm/min; ASTM D638 |
| Flexural Strength | 259 MPa | 37600 psi | ASTM D790 |
| | 263 MPa | 38100 psi | ISO 178 |

| Flexural Modulus Mechanical Properties | 9.51 GPa Metric | 1380 ksi English | ASTM D790 Comments |
|---|------------------------|----------------------------|--|
| | 9.85 GPa | 1430 ksi | ISO 178 |
| Izod Impact, Notched | 0.370 J/cm | 0.693 ft-lb/in | ASTM D256 |
| Izod Impact, Unnotched | 4.00 J/cm | 7.49 ft-lb/in | ASTM D4812 |
| Izod Impact, Notched (ISO) | 4.00 kJ/m ² | 1.90 ft-lb/in ² | 80*10*4; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | 29.0 kJ/m ² | 13.8 ft-lb/in ² | 80*10*4; ISO 180/1U |
| Dart Drop, Total Energy | 4.00 J | 2.95 ft-lb | Instrumented Impact Energy @ peak; ASTM D3763 |
| Impact Test | 1.00 J | 0.738 ft-lb | Multiaxial Impact; ISO 6603 |

| Thermal Properties | Metric | English | Comments |
|--|--|--|----------------------------------|
| CTE, linear, Parallel to Flow | 51.9 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ | 28.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| | 52.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ | 28.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ | ASTM E 831 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| CTE, linear, Transverse to Flow | 53.6 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ | 29.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ | ASTM E 831 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| Deflection Temperature at 1.8 MPa (264 psi) | 53.6 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ | 29.8 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ | ISO 11359-2 |
| | @Temperature -40.0 - 40.0 $\text{Å}^\circ\text{C}$ | @Temperature -40.0 - 104 $\text{Å}^\circ\text{F}$ | |
| Deflection Temperature at 1.8 MPa (264 psi) | 298 $\text{Å}^\circ\text{C}$ | 568 $\text{Å}^\circ\text{F}$ | Flatw 80*10*4 sp=64mm; ISO 75/Af |
| | 270 $\text{Å}^\circ\text{C}$ | 518 $\text{Å}^\circ\text{F}$ | |
| | @Thickness 3.20 mm | @Thickness 0.126 in | unannealed; ASTM D648 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|--------------------|--------------------|-----------|
| Surface Resistance | 1000 - 1.00e+7 ohm | 1000 - 1.00e+7 ohm | ASTM D257 |

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