

SABIC Innovative Plastics LNP THERMOCOMP TH0450C PU

Category : Polymer , Thermoplastic , Polyurethane, TP

Material Notes:

LNP* Thermocomp* TH0450C is a compound based on Polyurethane resin containing High Specific Gravity Filler. Added features of this material include: High Specific Gravity.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-TH0450C-PU.php

| Physical Properties | Metric | English | Comments |
|-----------------------------------|-----------------|--------------------------|------------------------------------|
| Density | 4.50 g/cc | 0.163 lb/in ³ | ASTM D792 |
| | 4.50 g/cc | 0.163 lb/in ³ | ISO 1183 |
| Moisture Absorption | 0.100 % | 0.100 % | 50% RH, 24 hrs; ASTM D570 |
| | 0.140 % | 0.140 % | 23 ^o C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow | 0.0057 cm/cm | 0.0057 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |
| | 0.0060 cm/cm | 0.0060 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |
| Linear Mold Shrinkage, Transverse | 0.0057 cm/cm | 0.0057 in/in | ISO 294 |
| | @Time 86400 sec | @Time 24.0 hour | |
| | 0.0060 cm/cm | 0.0060 in/in | ASTM D955 |
| | @Time 86400 sec | @Time 24.0 hour | |

| Mechanical Properties | Metric | English | Comments |
|---------------------------|----------|----------|-----------|
| Tensile Strength at Break | 13.0 MPa | 1890 psi | ASTM D638 |
| | 13.0 MPa | 1890 psi | ISO 527 |
| Tensile Strength, Yield | 15.0 MPa | 2180 psi | ASTM D638 |
| | 16.0 MPa | 2320 psi | ISO 527 |
| Elongation at Break | 23.1 % | 23.1 % | ISO 527 |
| | 27.3 % | 27.3 % | ASTM D638 |
| Elongation at Yield | 8.0 % | 8.0 % | ISO 527 |
| | 8.5 % | 8.5 % | ASTM D638 |

| Tensile Modulus Mechanical Properties | 1.17 GPa Metric | 170 ksi English | 1 mm/min; ISO 527 Comments |
|--|------------------------|----------------------------|--|
| | 1.33 GPa | 193 ksi | 50 mm/min; ASTM D638 |
| Flexural Strength | 20.0 MPa | 2900 psi | ASTM D790 |
| | 21.0 MPa | 3050 psi | ISO 178 |
| Flexural Modulus | 0.990 GPa | 144 ksi | ASTM D790 |
| | 1.13 GPa | 164 ksi | ISO 178 |
| Izod Impact, Notched | 1.17 J/cm | 2.19 ft-lb/in | ASTM D256 |
| Izod Impact, Unnotched | 11.0 J/cm | 20.6 ft-lb/in | ASTM D4812 |
| Izod Impact, Notched (ISO) | 13.0 kJ/m ² | 6.19 ft-lb/in ² | 80*10*4; ISO 180/1A |
| Izod Impact, Unnotched (ISO) | 74.0 kJ/m ² | 35.2 ft-lb/in ² | 80*10*4; ISO 180/1U |
| Dart Drop, Total Energy | 17.0 J | 12.5 ft-lb | Instrumented Impact Energy @ peak; ASTM D3763 |
| Impact Test | 12.0 J | 8.85 ft-lb | Multiaxial Impact; ISO 6603 |

| Thermal Properties | Metric | English | Comments |
|--|----------------------------------|---------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow | 77.4 Åµm/m-Å°C | 43.0 Åµin/in-Å°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| | 78.1 Åµm/m-Å°C | 43.4 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 | 84.6 Åµm/m-Å°C | 47.0 Åµin/in-Å°F | ASTM E 831 |
| | @Temperature -40.0 - 40.0 Å°C | @Temperature -40.0 - 104 Å°F | |
| | 84.6 Åµm/m-Å°C | 47.0 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) | 46.0 Å°C | 115 Å°F | Flatw 80*10*4 sp=64mm; ISO 75/Åf |
| | 46.0 Å°C @Thickness 3.20 mm | 115 Å°F @Thickness 0.126 in | |

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