

## SABIC Innovative Plastics LNP THERMOCOMP WF0039U PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

### Material Notes:

LNP\* THERMOCOMP\* WF0039U is a compound based on PBT resin containing 15% Glass Fiber. Added features of this grade include: Flame Retardant and UV Stabilized.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-THERMOCOMP-WF0039U-PBT.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-WF0039U-PBT.php)

| Physical Properties               | Metric                | English                   | Comments                  |
|-----------------------------------|-----------------------|---------------------------|---------------------------|
| Density                           | 1.57 g/cc             | 0.0567 lb/in <sup>3</sup> | ISO 1183                  |
|                                   | 1.58 g/cc             | 0.0571 lb/in <sup>3</sup> | ASTM D792                 |
| Moisture Absorption               | 0.0500 %              | 0.0500 %                  | 50% RH, 24 hrs; ASTM D570 |
|                                   | 0.0600 %              | 0.0600 %                  | 23°C / 50% RH; ISO 62     |
| Linear Mold Shrinkage, Flow       | 0.0050 - 0.0070 cm/cm | 0.0050 - 0.0070 in/in     | ASTM D955                 |
|                                   | @Time 86400 sec       | @Time 24.0 hour           |                           |
| Linear Mold Shrinkage, Transverse | 0.010 - 0.030 cm/cm   | 0.010 - 0.030 in/in       | ASTM D955                 |
|                                   | @Time 86400 sec       | @Time 24.0 hour           |                           |

| Mechanical Properties     | Metric     | English        | Comments                          |
|---------------------------|------------|----------------|-----------------------------------|
| Tensile Strength at Break | 95.0 MPa   | 13800 psi      | Type I, 5 mm/min; ASTM D638       |
|                           | 95.0 MPa   | 13800 psi      | 5 mm/min; ISO 527                 |
| Elongation at Break       | 2.3 %      | 2.3 %          | Type I, 5 mm/min; ASTM D638       |
|                           | 2.3 %      | 2.3 %          | 5 mm/min; ISO 527                 |
| Tensile Modulus           | 7.08 GPa   | 1030 ksi       | 1 mm/min; ISO 527                 |
|                           | 7.24 GPa   | 1050 ksi       | 50 mm/min; ASTM D638              |
| Flexural Strength         | 137 MPa    | 19900 psi      | 1.3 mm/min, 50 mm span; ASTM D790 |
|                           | 145 MPa    | 21000 psi      | ISO 178                           |
| Flexural Modulus          | 6.06 GPa   | 879 ksi        | 1.3 mm/min, 50 mm span; ASTM D790 |
|                           | 6.36 GPa   | 922 ksi        | 2 mm/min; ISO 178                 |
| Izod Impact, Notched      | 0.480 J/cm | 0.899 ft-lb/in | ASTM D256                         |

| Izod Impact, Unnotched<br>Mechanical Properties | 3.42 J/cm<br>Metric                | 6.41 ft-lb/in<br>English            | ASTM D4812<br>Comments      |
|-------------------------------------------------|------------------------------------|-------------------------------------|-----------------------------|
| Izod Impact, Notched (ISO)                      | 5.00 kJ/m <sup>2</sup>             | 2.38 ft-lb/in <sup>2</sup>          | 80*10*4; ISO 180/1A         |
| Izod Impact, Unnotched (ISO)                    | 19.0 kJ/m <sup>2</sup>             | 9.04 ft-lb/in <sup>2</sup>          | 80*10*4; ISO 180/1U         |
| Dart Drop, Total Energy                         | 4.00 J<br>@Temperature 23.0<br>Â°C | 2.95 ft-lb<br>@Temperature 73.4 Â°F | 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                  | 42.3 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C | 23.5 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D696                        |
| CTE, linear, Transverse to Flow                | 107 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C  | 59.4 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D696                        |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 212 Â°C                                            | 414 Â°F                                              | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
|                                                | 215 Â°C<br>@Thickness 3.20 mm                      | 419 Â°F<br>@Thickness 0.126 in                       | unannealed; ASTM D648            |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 185 Â°C                                            | 365 Â°F                                              | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                                | 194 Â°C<br>@Thickness 3.20 mm                      | 381 Â°F<br>@Thickness 0.126 in                       | unannealed; ASTM D648            |

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