

## SABIC Innovative Plastics LNP Thermocomp WH0270FX\_WH5A289 PBT

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

### Material Notes:

2.7 specific gravity PBTThis 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-WH0270FXWH5A289-PBT.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-WH0270FXWH5A289-PBT.php)

| Physical Properties                | Metric                                   | English                                  | Comments           |
|------------------------------------|------------------------------------------|------------------------------------------|--------------------|
| Density                            | 2.695 g/cc                               | 0.09736 lb/in <sup>3</sup>               | ASTM D 792         |
| Moisture Absorption at Equilibrium | 0.080 %<br>@Time 86400 sec               | 0.080 %<br>@Time 24.0 hour               | 50% RH; ASTM D 570 |
| Linear Mold Shrinkage, Flow        | 0.0069 - 0.0089 cm/cm<br>@Time 86400 sec | 0.0069 - 0.0089 in/in<br>@Time 24.0 hour | ASTM D 955         |
| Linear Mold Shrinkage, Transverse  | 0.010 - 0.012 cm/cm<br>@Time 86400 sec   | 0.010 - 0.012 in/in<br>@Time 24.0 hour   | ASTM D 955         |

| Mechanical Properties     | Metric    | English  | Comments                           |
|---------------------------|-----------|----------|------------------------------------|
| Tensile Strength at Break | 30.0 MPa  | 4350 psi | 5 mm/min; ISO 527                  |
|                           | 31.0 MPa  | 4500 psi | Type I, 5 mm/min; ASTM D 638       |
| Tensile Strength, Yield   | 31.0 MPa  | 4500 psi | Type I, 5 mm/min; ASTM D 638       |
|                           | 31.0 MPa  | 4500 psi | 5 mm/min; ISO 527                  |
| Elongation at Break       | 0.70 %    | 0.70 %   | Type I, 5 mm/min; ASTM D 638       |
|                           | 0.70 %    | 0.70 %   | 5 mm/min; ISO 527                  |
|                           | 0.80 %    | 0.80 %   | Flexural Strain, 2 mm/min; ISO 178 |
| Elongation at Yield       | 0.50 %    | 0.50 %   | Type I, 5 mm/min; ASTM D 638       |
|                           | 0.50 %    | 0.50 %   | 5 mm/min; ISO 527                  |
| Tensile Modulus           | 8.28 GPa  | 1200 ksi | 1 mm/min; ISO 527                  |
|                           | 10.46 GPa | 1517 ksi | 5 mm/min; ASTM D 638               |
| Flexural Yield Strength   | 52.0 MPa  | 7540 psi | 2 mm/min; ISO 178                  |
|                           | 56.0 MPa  | 8120 psi | 1.3 mm/min, 50 mm span; ASTM D 790 |
|                           | 8.32 GPa  | 1210 ksi | 1.3 mm/min, 50 mm span; ASTM D     |

| Flexural Modulus<br>Mechanical Properties | Metric                                  | English                                  | 790<br>Comments                                  |
|-------------------------------------------|-----------------------------------------|------------------------------------------|--------------------------------------------------|
|                                           | 8.32 GPa                                | 1210 ksi                                 | 2 mm/min; ISO 178                                |
| Izod Impact, Notched                      | 0.190 J/cm<br>@Temperature 23.0<br>Â°C  | 0.356 ft-lb/in<br>@Temperature 73.4 Â°F  | ASTM D 256                                       |
| Izod Impact, Unnotched                    | 1.50 J/cm<br>@Temperature 23.0<br>Â°C   | 2.81 ft-lb/in<br>@Temperature 73.4 Â°F   | ASTM D 4812                                      |
| Izod Impact, Notched (ISO)                | 3.00 kJ/mÂ²<br>@Temperature 23.0<br>Â°C | 1.43 ft-lb/inÂ²<br>@Temperature 73.4 Â°F | 80*10*4; ISO 180/1A                              |
| Izod Impact, Unnotched (ISO)              | 10.0 kJ/mÂ²<br>@Temperature 23.0<br>Â°C | 4.76 ft-lb/inÂ²<br>@Temperature 73.4 Â°F | 80*10*4; ISO 180/1U                              |
| Impact Test                               | 3.00 J<br>@Temperature 23.0<br>Â°C      | 2.21 ft-lb<br>@Temperature 73.4 Â°F      | Instrumented Impact Total Energy;<br>ASTM D 3763 |

| Thermal Properties                             | Metric                                                    | English                                                     | Comments                         |
|------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow                  | 43.3 - 45.3 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C | 24.1 - 25.2 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM E 831                       |
| CTE, linear, Transverse to Flow                | 57.5 - 59.5 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C | 31.9 - 33.1 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM E 831                       |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 162 Â°C                                                   | 324 Â°F                                                     | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                                | 164 Â°C<br>@Thickness 3.20 mm                             | 327 Â°F<br>@Thickness 0.126 in                              | unannealed; ASTM D 648           |

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