

## SABIC Innovative Plastics LNP Thermocomp KF003 Acetal Copoly (Asia Pacific)

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, Glass Fiber Reinforced

### Material Notes:

LNP\* Thermocomp\* KF003 is a compound based on Acetal Copolymer resin containing Glass Fiber. This data was supplied by SABIC-IP for the Asia Pacific region.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-Thermocomp-KF003-Acetal-Copoly-Asia-Pacific.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-KF003-Acetal-Copoly-Asia-Pacific.php)

| Physical Properties                | Metric              | English                   | Comments           |
|------------------------------------|---------------------|---------------------------|--------------------|
| Density                            | 1.52 g/cc           | 0.0549 lb/in <sup>3</sup> | ASTM D 792         |
|                                    | 1.52 g/cc           | 0.0549 lb/in <sup>3</sup> | ISO 1183           |
| Moisture Absorption at Equilibrium | 0.20 %              | 0.20 %                    | 50% RH; ASTM D 570 |
|                                    | @Time 86400 sec     | @Time 24.0 hour           |                    |
| Linear Mold Shrinkage, Flow        | 0.011 - 0.013 cm/cm | 0.011 - 0.013 in/in       | ASTM D 955         |
|                                    | @Time 86400 sec     | @Time 24.0 hour           |                    |
|                                    | 0.012 cm/cm         | 0.012 in/in               | ISO 294            |
|                                    | @Time 86400 sec     | @Time 24.0 hour           |                    |
| Linear Mold Shrinkage, Transverse  | 0.019 - 0.021 cm/cm | 0.019 - 0.021 in/in       | ASTM D 955         |
|                                    | @Time 86400 sec     | @Time 24.0 hour           |                    |
|                                    | 0.020 cm/cm         | 0.020 in/in               | ISO 294            |
|                                    | @Time 86400 sec     | @Time 24.0 hour           |                    |

| Mechanical Properties     | Metric   | English   | Comments          |
|---------------------------|----------|-----------|-------------------|
| Tensile Strength at Break | 79.0 MPa | 11500 psi | ISO 527           |
|                           | 80.0 MPa | 11600 psi | ASTM D 638        |
| Tensile Strength, Yield   | 80.0 MPa | 11600 psi | ASTM D 638        |
|                           | 80.0 MPa | 11600 psi | ISO 527           |
| Elongation at Break       | 1.9 %    | 1.9 %     | ISO 527           |
|                           | 2.1 %    | 2.1 %     | ASTM D 638        |
| Elongation at Yield       | 1.9 %    | 1.9 %     | ISO 527           |
|                           | 2.1 %    | 2.1 %     | ASTM D 638        |
| Tensile Modulus           | 7.14 GPa | 1040 ksi  | 1 mm/min; ISO 527 |

| Mechanical Properties        | Metric<br>7.58 GPa                      | English<br>1100 ksi                      | Comments<br>50 mm/min; ASTM D 638                 |
|------------------------------|-----------------------------------------|------------------------------------------|---------------------------------------------------|
| Flexural Strength            | 115 MPa                                 | 16700 psi                                | ISO 178                                           |
|                              | 117 MPa                                 | 17000 psi                                | ASTM D 790                                        |
| Flexural Modulus             | 6.00 GPa                                | 870 ksi                                  | ISO 178                                           |
|                              | 6.20 GPa                                | 899 ksi                                  | ASTM D 790                                        |
| Izod Impact, Notched         | 0.530 J/cm<br>@Temperature 23.0<br>Â°C  | 0.993 ft-lb/in<br>@Temperature 73.4 Â°F  | ASTM D 256                                        |
| Izod Impact, Unnotched       | 4.48 J/cm<br>@Temperature 23.0<br>Â°C   | 8.39 ft-lb/in<br>@Temperature 73.4 Â°F   | ASTM D 4812                                       |
| Izod Impact, Notched (ISO)   | 5.00 kJ/mÂ²<br>@Temperature 23.0<br>Â°C | 2.38 ft-lb/inÂ²<br>@Temperature 73.4 Â°F | 80*10*4; ISO 180/1A                               |
| Izod Impact, Unnotched (ISO) | 27.0 kJ/mÂ²<br>@Temperature 23.0<br>Â°C | 12.8 ft-lb/inÂ²<br>@Temperature 73.4 Â°F | 80*10*4; ISO 180/1U                               |
| Impact Test                  | 2.00 J                                  | 1.48 ft-lb                               | Multiaxial Impact; ISO 6603                       |
|                              | 9.00 J<br>@Temperature 23.0<br>Â°C      | 6.64 ft-lb<br>@Temperature 73.4 Â°F      | Instrumented Impact Energy @ peak;<br>ASTM D 3763 |

| Thermal Properties              | Metric                                             | English                                             | Comments    |
|---------------------------------|----------------------------------------------------|-----------------------------------------------------|-------------|
| CTE, linear, Parallel to Flow   | 10.8 Âµm/m-Â°C<br>@Temperature -40.0 -<br>40.0 Â°C | 6.00 Âµin/in-Â°F<br>@Temperature -40.0 -<br>104 Â°F | ASTM E 831  |
|                                 | 113 Âµm/m-Â°C<br>@Temperature -40.0 -<br>40.0 Â°C  | 62.8 Âµin/in-Â°F<br>@Temperature -40.0 -<br>104 Â°F | ISO 11359-2 |
| CTE, linear, Transverse to Flow | 3.60 Âµm/m-Â°C<br>@Temperature -40.0 -<br>40.0 Â°C | 2.00 Âµin/in-Â°F<br>@Temperature -40.0 -<br>104 Â°F | ASTM E 831  |
|                                 | 44.3 Âµm/m-Â°C<br>@Temperature -40.0 -<br>40.0 Â°C | 24.6 Âµin/in-Â°F<br>@Temperature -40.0 -<br>104 Â°F | ISO 11359-2 |

| Thermal Properties<br><small>Deflection Temperature at 0.46 MPa<br/>(107 psi)</small> | Metric<br><small>165 Â°C</small> | English<br><small>329 Â°F</small> | Comments<br><small>Flatw 80*10*4 sp=64mm; ISO 75/Bf</small> |
|---------------------------------------------------------------------------------------|----------------------------------|-----------------------------------|-------------------------------------------------------------|
|                                                                                       | 162 Â°C<br>@Thickness 3.20 mm    | 324 Â°F<br>@Thickness 0.126 in    | unannealed; ASTM D 648                                      |
| Deflection Temperature at 1.8 MPa<br>(264 psi)                                        | 157 Â°C                          | 315 Â°F                           | Flatw 80*10*4 sp=64mm; ISO 75/Af                            |
|                                                                                       | 160 Â°C<br>@Thickness 3.20 mm    | 320 Â°F<br>@Thickness 0.126 in    | unannealed; ASTM D 648                                      |

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