

## SABIC Innovative Plastics LNP Thermocomp YF004 Polyester Elastomer

Category : Polymer , Thermoplastic , Polyester, TP

### Material Notes:

LNP THERMOCOMP\* YF004 is a compound based on Polyester Elastomer resin containing Glass Fiber. This 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-YF004-Polyester-Elastomer.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-Thermocomp-YF004-Polyester-Elastomer.php)

| Physical Properties                | Metric                    | English                   | Comments                           |
|------------------------------------|---------------------------|---------------------------|------------------------------------|
| Specific Gravity                   | 1.35 g/cc                 | 1.35 g/cc                 | ASTM D 792                         |
| Density                            | 1.35 g/cc                 | 0.0488 lb/in <sup>3</sup> | ASTM D 792                         |
| Moisture Absorption at Equilibrium | 0.71 %                    | 0.71 %                    | 23 <sup>o</sup> C / 50% RH; ISO 62 |
|                                    | 0.71 %<br>@Time 86400 sec | 0.71 %<br>@Time 24.0 hour | 50% RH; ASTM D 570                 |
| Linear Mold Shrinkage, Flow        | 0.0020 - 0.0040 cm/cm     | 0.0020 - 0.0040 in/in     | ASTM D 955                         |
|                                    | @Time 86400 sec           | @Time 24.0 hour           |                                    |
| Linear Mold Shrinkage, Transverse  | 0.0060 - 0.0080 cm/cm     | 0.0060 - 0.0080 in/in     | ASTM D 955                         |
|                                    | @Time 86400 sec           | @Time 24.0 hour           |                                    |

| Mechanical Properties     | Metric    | English       | Comments                           |
|---------------------------|-----------|---------------|------------------------------------|
| Tensile Strength at Break | 47.0 MPa  | 6820 psi      | Type I, 5 mm/min; ASTM D 638       |
|                           | 48.0 MPa  | 6960 psi      | 5 mm/min; ISO 527                  |
| Elongation at Break       | 11.9 %    | 11.9 %        | Type I, 5 mm/min; ASTM D 638       |
|                           | 12.7 %    | 12.7 %        | 5 mm/min; ISO 527                  |
| Tensile Modulus           | 2.16 GPa  | 313 ksi       | 1 mm/min; ISO 527                  |
|                           | 2.64 GPa  | 383 ksi       | 50 mm/min; ASTM D 638              |
| Flexural Strength         | 25.0 MPa  | 3630 psi      | ISO 178                            |
|                           | 55.0 MPa  | 7980 psi      | 1.3 mm/min, 50 mm span; ASTM D 790 |
| Flexural Modulus          | 0.310 GPa | 45.0 ksi      | 2 mm/min; ISO 178                  |
|                           | 1.92 GPa  | 278 ksi       | 1.3 mm/min, 50 mm span; ASTM D 790 |
|                           | 4.01 J/cm | 7.51 ft-lb/in |                                    |

| Mechanical Properties        | Metric                                      | English                                      | Comments   |
|------------------------------|---|--|--|
|                              | @Temperature 23.0<br>Â°C                    | @Temperature 73.4 Â°F                        |  |
| Izod Impact, Unnotched       | NB<br><br>@Temperature 23.0<br>Â°C          | NB<br><br>@Temperature 73.4 Â°F              | ASTM D 4812                                      |
| Izod Impact, Notched (ISO)   | 37.0 kJ/mÂ²<br><br>@Temperature 23.0<br>Â°C | 17.6 ft-lb/inÂ²<br><br>@Temperature 73.4 Â°F | 80*10*4; ISO 180/1A                              |
| Izod Impact, Unnotched (ISO) | NB<br><br>@Temperature 23.0<br>Â°C          | NB<br><br>@Temperature 73.4 Â°F              | 80*10*4; ISO 180/1U                              |
| Impact Test                  | 10.0 J                                      | 7.38 ft-lb                                   | Multiaxial Impact; ISO 6603                      |
|                              | 14.0 J<br><br>@Temperature 23.0<br>Â°C      | 10.3 ft-lb<br><br>@Temperature 73.4 Â°F      | Instrumented Impact Total Energy;<br>ASTM D 3763 |

| Thermal Properties                             | Metric   | English  | Comments                         |
|--|--|--|----------------------------------|
| CTE, linear, Parallel to Flow                  | 121 Âµm/m-Â°C<br><br>@Temperature -30.0 -<br>30.0 Â°C  | 67.2 Âµin/in-Â°F<br><br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D 696                       |
| CTE, linear, Transverse to Flow                | 32.0 Âµm/m-Â°C<br><br>@Temperature -30.0 -<br>30.0 Â°C | 17.8 Âµin/in-Â°F<br><br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D 696                       |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 184 Â°C  | 363 Â°F  | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
|  | 186 Â°C<br><br>@Thickness 3.20 mm                      | 367 Â°F<br><br>@Thickness 0.126 in                       | unannealed; ASTM D 648           |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 129 Â°C  | 264 Â°F  | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|  | 151 Â°C<br><br>@Thickness 3.20 mm                      | 304 Â°F<br><br>@Thickness 0.126 in                       | unannealed; ASTM D 648           |

## Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China