

## SABIC Innovative Plastics LNP THERMOCOMP RF006I PA 66

Category : Polymer , Thermoplastic , Nylon , Nylon 66

### Material Notes:

LNP\* THERMOTUF\* RF006I is a compound based on Nylon 66 resin containing 30% Glass Fiber. Added features of this material include:  
High Impact.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-THERMOCOMP-RF006I-PA-66.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-THERMOCOMP-RF006I-PA-66.php)

| Physical Properties               | Metric          | English                   | Comments                  |
|-----------------------------------|-----------------|---------------------------|---------------------------|
| Density                           | 1.37 g/cc       | 0.0495 lb/in <sup>3</sup> | ISO 1183                  |
|                                   | 1.38 g/cc       | 0.0499 lb/in <sup>3</sup> | ASTM D792                 |
| Moisture Absorption               | 0.630 %         | 0.630 %                   | 50% RH, 24 hrs; ASTM D570 |
| Linear Mold Shrinkage, Flow       | 0.0027 cm/cm    | 0.0027 in/in              | ISO 294                   |
|                                   | @Time 86400 sec | @Time 24.0 hour           |                           |
|                                   | 0.0030 cm/cm    | 0.0030 in/in              | ASTM D955                 |
|                                   | @Time 86400 sec | @Time 24.0 hour           |                           |
| Linear Mold Shrinkage, Transverse | 0.011 cm/cm     | 0.011 in/in               | ASTM D955                 |
|                                   | @Time 86400 sec | @Time 24.0 hour           |                           |
|                                   | 0.0112 cm/cm    | 0.0112 in/in              | ISO 294                   |
|                                   | @Time 86400 sec | @Time 24.0 hour           |                           |

| Mechanical Properties     | Metric    | English   | Comments             |
|---------------------------|-----------|-----------|----------------------|
| Tensile Strength at Break | 161 MPa   | 23400 psi | ASTM D638            |
|                           | 179 MPa   | 26000 psi | ISO 527              |
| Elongation at Break       | 2.9 %     | 2.9 %     | ISO 527              |
|                           | 3.2 %     | 3.2 %     | ASTM D638            |
| Tensile Modulus           | 10.41 GPa | 1510 ksi  | 50 mm/min; ASTM D638 |
|                           | 10.84 GPa | 1572 ksi  | 1 mm/min; ISO 527    |
| Flexural Strength         | 248 MPa   | 36000 psi | ASTM D790            |
|                           | 266 MPa   | 38600 psi | ISO 178              |
| Flexural Modulus          | 8.68 GPa  | 1260 ksi  | ASTM D790            |

| Mechanical Properties        | 9.48 GPa<br>Metric | 1370 ksi<br>English | ISO 178<br>Comments                              |
|------------------------------|--------------------|---------------------|--------------------------------------------------|
| Izod Impact, Notched         | 1.17 J/cm          | 2.19 ft-lb/in       | ASTM D256                                        |
| Izod Impact, Unnotched       | 11.21 J/cm         | 21.00 ft-lb/in      | ASTM D4812                                       |
| Izod Impact, Notched (ISO)   | 14.0 kJ/mÂ²        | 6.66 ft-lb/inÂ²     | 80*10*4; ISO 180/1A                              |
| Izod Impact, Unnotched (ISO) | 75.0 kJ/mÂ²        | 35.7 ft-lb/inÂ²     | 80*10*4; ISO 180/1U                              |
| Dart Drop, Total Energy      | 17.0 J             | 12.5 ft-lb          | Instrumented Impact Energy @ peak;<br>ASTM D3763 |
| Impact Test                  | 5.00 J             | 3.69 ft-lb          | Multiaxial Impact; ISO 6603                      |

| Thermal Properties                          | Metric                        | English                      | Comments              |
|---------------------------------------------|-------------------------------|------------------------------|-----------------------|
| CTE, linear, Parallel to Flow               | 27.5 Âµm/m-Â°C                | 15.3 Âµin/in-Â°F             | ASTM E 831            |
|                                             | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |                       |
|                                             | 27.5 Âµm/m-Â°C                | 15.3 Âµin/in-Â°F             | ISO 11359-2           |
|                                             | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |                       |
| CTE, linear, Transverse to Flow             | 60.8 Âµm/m-Â°C                | 33.8 Âµin/in-Â°F             | ASTM E 831            |
|                                             | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |                       |
|                                             | 60.8 Âµm/m-Â°C                | 33.8 Âµin/in-Â°F             | ISO 11359-2           |
|                                             | @Temperature -40.0 - 40.0 Â°C | @Temperature -40.0 - 104 Â°F |                       |
| Deflection Temperature at 0.46 MPa (66 psi) | 126 Â°C                       | 259 Â°F                      | unannealed; ASTM D648 |
|                                             | @Thickness 3.20 mm            | @Thickness 0.126 in          |                       |
| Deflection Temperature at 1.8 MPa (264 psi) | 121 Â°C                       | 250 Â°F                      | unannealed; ASTM D648 |
|                                             | @Thickness 3.20 mm            | @Thickness 0.126 in          |                       |

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