

## SABIC Innovative Plastics LNP LUBRICOMP EFL36 PEI

Category : Polymer , Thermoplastic , Polyetherimide (PEI)

### Material Notes:

LNP LUBRICOMP\* EFL36 is a compound based on Polyetherimide resin containing 30% Glass Fiber, 15% PTFE. Added features of this material include: Internally Lubricated.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-LUBRICOMP-EFL36-PEI.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-EFL36-PEI.php)

| Physical Properties               | Metric                | English                   | Comments                           |
|-----------------------------------|-----------------------|---------------------------|------------------------------------|
| Density                           | 1.62 g/cc             | 0.0585 lb/in <sup>3</sup> | ASTM D792                          |
|                                   | 1.62 g/cc             | 0.0585 lb/in <sup>3</sup> | ISO 1183                           |
| Moisture Absorption               | 0.150 %               | 0.150 %                   | 50% RH, 24 hrs; ASTM D570          |
|                                   | 0.220 %               | 0.220 %                   | 23 <sup>o</sup> C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow       | 0.0010 - 0.0030 cm/cm | 0.0010 - 0.0030 in/in     | ASTM D955                          |
|                                   | @Time 86400 sec       | @Time 24.0 hour           |                                    |
|                                   | 0.0021 - 0.0024 cm/cm | 0.0021 - 0.0024 in/in     | ISO 294                            |
|                                   | @Time 86400 sec       | @Time 24.0 hour           |                                    |
| Linear Mold Shrinkage, Transverse | 0.0035 - 0.0047 cm/cm | 0.0035 - 0.0047 in/in     | ISO 294                            |
|                                   | @Time 86400 sec       | @Time 24.0 hour           |                                    |
|                                   | 0.0040 - 0.0060 cm/cm | 0.0040 - 0.0060 in/in     | ASTM D955                          |
|                                   | @Time 86400 sec       | @Time 24.0 hour           |                                    |

| Mechanical Properties     | Metric    | English   | Comments             |
|---------------------------|-----------|-----------|----------------------|
| Tensile Strength at Break | 168 MPa   | 24400 psi | ISO 527              |
|                           | 175 MPa   | 25400 psi | ASTM D638            |
| Elongation at Break       | 2.0 %     | 2.0 %     | ASTM D638            |
|                           | 2.0 %     | 2.0 %     | ISO 527              |
| Tensile Modulus           | 11.18 GPa | 1622 ksi  | 1 mm/min; ISO 527    |
|                           | 12.68 GPa | 1839 ksi  | 50 mm/min; ASTM D638 |
| Flexural Strength         | 248 MPa   | 36000 psi | ISO 178              |
|                           | 252 MPa   | 36500 psi | ASTM D790            |

| Flexural Modulus<br>Mechanical Properties | 11.3 GPa<br>Metric                           | 1640 ksi<br>English                                        | ASTM D790<br>Comments                            |
|-------------------------------------------|----------------------------------------------|------------------------------------------------------------|--------------------------------------------------|
|                                           | 11.39 GPa                                    | 1652 ksi                                                   | ISO 178                                          |
| Izod Impact, Notched                      | 1.22 J/cm                                    | 2.29 ft-lb/in                                              | ASTM D256                                        |
| Izod Impact, Unnotched                    | 7.10 J/cm                                    | 13.3 ft-lb/in                                              | ASTM D4812                                       |
| Izod Impact, Notched (ISO)                | 13.0 kJ/m <sup>2</sup>                       | 6.19 ft-lb/in <sup>2</sup>                                 | 80*10*4; ISO 180/1A                              |
| Izod Impact, Unnotched (ISO)              | 46.0 kJ/m <sup>2</sup>                       | 21.9 ft-lb/in <sup>2</sup>                                 | 80*10*4; ISO 180/1U                              |
| Dart Drop, Total Energy                   | 10.0 J                                       | 7.38 ft-lb                                                 | Instrumented Impact Energy @ peak;<br>ASTM D3763 |
| Impact Test                               | 3.00 J                                       | 2.21 ft-lb                                                 | Multiaxial Impact; ISO 6603                      |
| Coefficient of Friction, Dynamic          | 0.45                                         | 0.45                                                       | ASTM D3702 Modified                              |
| Coefficient of Friction, Static           | 0.43                                         | 0.43                                                       | ASTM D3702 Modified                              |
| K (wear) Factor                           | 70.5 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M | 35.0 x 10 <sup>-10</sup> in <sup>3</sup> -<br>min/ft-lb-hr | Washer; ASTM D3702 Modified                      |

| Thermal Properties                             | Metric                           | English                         | Comments                         |
|------------------------------------------------|----------------------------------|---------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow                  | 39.6 Âµm/m-Â°C                   | 22.0 Âµin/in-Â°F                | ASTM E 831                       |
|                                                | @Temperature -40.0 -<br>40.0 Â°C | @Temperature -40.0 -<br>104 Â°F |                                  |
|                                                | 39.8 Âµm/m-Â°C                   | 22.1 Âµin/in-Â°F                | ISO 11359-2                      |
|                                                | @Temperature -40.0 -<br>40.0 Â°C | @Temperature -40.0 -<br>104 Â°F |                                  |
| CTE, linear, Transverse to Flow                | 27.0 Âµm/m-Â°C                   | 15.0 Âµin/in-Â°F                | ASTM E 831                       |
|                                                | @Temperature -40.0 -<br>40.0 Â°C | @Temperature -40.0 -<br>104 Â°F |                                  |
|                                                | 28.4 Âµm/m-Â°C                   | 15.8 Âµin/in-Â°F                | ISO 11359-2                      |
|                                                | @Temperature -40.0 -<br>40.0 Â°C | @Temperature -40.0 -<br>104 Â°F |                                  |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 204 Â°C                          | 399 Â°F                         | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                                | 202 Â°C                          | 396 Â°F                         | unannealed; ASTM D648            |
|                                                | @Thickness 3.20 mm               | @Thickness 0.126 in             |                                  |

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