

## SABIC Innovative Plastics LNP LUBRICOMP JCL36E PES

Category : Polymer , Thermoplastic , Polyethersulfone (PES)

### Material Notes:

LNP\* LUBRICOMP\* JCL36E is a compound based on Polyethersulfone (PES) resin containing 30% Carbon Fiber, 15% PTFE. Added feature of this grade is: Wear Resistant.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-LUBRICOMP-JCL36E-PES.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-JCL36E-PES.php)

| Physical Properties               | Metric                                     | English                                    | Comments                  |
|-----------------------------------|--------------------------------------------|--------------------------------------------|---------------------------|
| Specific Gravity                  | 1.55 g/cc                                  | 1.55 g/cc                                  | ASTM D792                 |
| Density                           | 1.54 g/cc                                  | 0.0556 lb/in <sup>3</sup>                  | ASTM D792                 |
| Moisture Absorption               | 0.0200 %                                   | 0.0200 %                                   | 50% RH, 24 hrs; ASTM D570 |
|                                   | 0.0400 %                                   | 0.0400 %                                   | 23°C / 50% RH; ISO 62     |
| Linear Mold Shrinkage, Flow       | 0.00010 - 0.00030 cm/cm<br>@Time 86400 sec | 0.00010 - 0.00030 in/in<br>@Time 24.0 hour | ASTM D955                 |
| Linear Mold Shrinkage, Transverse | 0.0040 - 0.0060 cm/cm<br>@Time 86400 sec   | 0.0040 - 0.0060 in/in<br>@Time 24.0 hour   | ASTM D955                 |

| Mechanical Properties     | Metric    | English   | Comments                          |
|---------------------------|-----------|-----------|-----------------------------------|
| Tensile Strength at Break | 142 MPa   | 20600 psi | Type I, 5 mm/min; ASTM D638       |
|                           | 145 MPa   | 21000 psi | 5 mm/min; ISO 527                 |
| Tensile Strength, Yield   | 142 MPa   | 20600 psi | Type I, 5 mm/min; ASTM D638       |
|                           | 145 MPa   | 21000 psi | 5 mm/min; ISO 527                 |
| Elongation at Break       | 0.50 %    | 0.50 %    | Type I, 5 mm/min; ASTM D638       |
|                           | 0.50 %    | 0.50 %    | 5 mm/min; ISO 527                 |
| Elongation at Yield       | 0.50 %    | 0.50 %    | Type I, 5 mm/min; ASTM D638       |
|                           | 0.50 %    | 0.50 %    | 5 mm/min; ISO 527                 |
| Tensile Modulus           | 26.32 GPa | 3817 ksi  | 1 mm/min; ISO 527                 |
|                           | 26.88 GPa | 3899 ksi  | 50 mm/min; ASTM D638              |
| Flexural Strength         | 198 MPa   | 28700 psi | 1.3 mm/min, 50 mm span; ASTM D790 |

| Mechanical Properties            | 213 MPa<br>Metric                            | 30900 psi<br>English                                       | ISO 178<br>Comments               |
|----------------------------------|----------------------------------------------|------------------------------------------------------------|-----------------------------------|
| Flexural Yield Strength          | 199 MPa                                      | 28900 psi                                                  | 1.3 mm/min, 50 mm span; ASTM D790 |
| Flexural Modulus                 | 22.88 GPa                                    | 3318 ksi                                                   | 2 mm/min; ISO 178                 |
|                                  | 23.4 GPa                                     | 3390 ksi                                                   | 1.3 mm/min, 50 mm span; ASTM D790 |
| Izod Impact, Notched             | 0.580 J/cm                                   | 1.09 ft-lb/in                                              | ASTM D256                         |
| Izod Impact, Unnotched           | 3.17 J/cm                                    | 5.94 ft-lb/in                                              | ASTM D4812                        |
| Izod Impact, Notched (ISO)       | 6.00 kJ/m <sup>2</sup>                       | 2.86 ft-lb/in <sup>2</sup>                                 | 80*10*4; ISO 180/1A               |
| Dart Drop, Total Energy          | 5.00 J<br>@Temperature 23.0<br>Â°C           | 3.69 ft-lb<br>@Temperature 73.4 Â°F                        | ASTM D3763                        |
| Coefficient of Friction, Dynamic | 0.34                                         | 0.34                                                       | ASTM D3702 Modified               |
| Coefficient of Friction, Static  | 0.36                                         | 0.36                                                       | ASTM D3702 Modified               |
| K (wear) Factor                  | 50.4 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M | 25.0 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                  | 13.0 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C | 7.22 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D696                        |
| CTE, linear, Transverse to Flow                | 27.0 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C | 15.0 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D696                        |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 280 Â°C                                            | 536 Â°F                                              | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
|                                                | 279 Â°C<br>@Thickness 3.20 mm                      | 534 Â°F<br>@Thickness 0.126 in                       | unannealed; ASTM D648            |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 270 Â°C                                            | 518 Â°F                                              | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                                | 270 Â°C<br>@Thickness 3.20 mm                      | 518 Â°F<br>@Thickness 0.126 in                       | unannealed; ASTM D648            |

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