

## SABIC Innovative Plastics LNP LUBRICOMP KFL36 Acetal Copolymer

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, 30% Glass Fiber Reinforced

### Material Notes:

LNP\* LUBRICOMP\* KFL36 is a compound based on Acetal Copolymer resin containing 30% Glass Fiber, 15% PTFE. Added feature of this material is: Wear Resistant.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_SABIC-Innovative-Plastics-LNP-LUBRICOMP-KFL36-Acetal-Copolymer.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-KFL36-Acetal-Copolymer.php)

| Physical Properties               | Metric                                  | English                                 | Comments                           |
|-----------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------|
| Specific Gravity                  | 1.75 g/cc                               | 1.75 g/cc                               | ASTM D792                          |
| Density                           | 1.75 g/cc                               | 0.0632 lb/in <sup>3</sup>               | ASTM D792                          |
| Moisture Absorption               | 0.160 %                                 | 0.160 %                                 | 50% RH, 24 hrs; ASTM D570          |
|                                   | 0.260 %                                 | 0.260 %                                 | 23 <sup>o</sup> C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow       | 0.0070 - 0.010 cm/cm<br>@Time 86400 sec | 0.0070 - 0.010 in/in<br>@Time 24.0 hour | ASTM D955                          |
| Linear Mold Shrinkage, Transverse | 0.010 - 0.030 cm/cm<br>@Time 86400 sec  | 0.010 - 0.030 in/in<br>@Time 24.0 hour  | ASTM D955                          |

| Mechanical Properties     | Metric     | English        | Comments                          |
|---------------------------|------------|----------------|-----------------------------------|
| Tensile Strength at Break | 84.0 MPa   | 12200 psi      | 5 mm/min; ISO 527                 |
|                           | 88.0 MPa   | 12800 psi      | Type I, 5 mm/min; ASTM D638       |
| Elongation at Break       | 1.3 %      | 1.3 %          | Type I, 5 mm/min; ASTM D638       |
|                           | 1.3 %      | 1.3 %          | 5 mm/min; ISO 527                 |
| Tensile Modulus           | 10.61 GPa  | 1539 ksi       | 1 mm/min; ISO 527                 |
|                           | 10.82 GPa  | 1569 ksi       | 50 mm/min; ASTM D638              |
| Flexural Strength         | 107 MPa    | 15500 psi      | 1.3 mm/min, 50 mm span; ASTM D790 |
|                           | 130 MPa    | 18900 psi      | ISO 178                           |
| Flexural Modulus          | 9.28 GPa   | 1350 ksi       | 1.3 mm/min, 50 mm span; ASTM D790 |
|                           | 9.93 GPa   | 1440 ksi       | 2 mm/min; ISO 178                 |
| Izod Impact, Notched      | 0.500 J/cm | 0.937 ft-lb/in | ASTM D256                         |

| Izod Impact, Notched (ISO)<br>Mechanical Properties | 5.00 kJ/mÂ²<br>Metric              | 2.38 ft-lb/inÂ²<br>English                    | 80*10*4; ISO 180/1A<br>Comments |
|-----------------------------------------------------|------------------------------------|-----------------------------------------------|---------------------------------|
| Izod Impact, Unnotched (ISO)                        | 25.0 kJ/mÂ²                        | 11.9 ft-lb/inÂ²                               | 80*10*4; ISO 180/1U             |
| Dart Drop, Total Energy                             | 10.0 J<br>@Temperature 23.0<br>Â°C | 7.38 ft-lb<br>@Temperature 73.4 Â°F           | ASTM D3763                      |
| Impact Test                                         | 2.00 J                             | 1.48 ft-lb                                    | Multiaxial Impact; ISO 6603     |
| Coefficient of Friction, Dynamic                    | 0.40                               | 0.40                                          | ASTM D3702 Modified             |
| Coefficient of Friction, Static                     | 0.46                               | 0.46                                          | ASTM D3702 Modified             |
| K (wear) Factor                                     | 471 x 10 <sup>-8</sup> mmÂ³/N-M    | 234 x 10 <sup>-10</sup> inÂ³-<br>min/ft-lb-hr | Washer; ASTM D3702 Modified     |

| Thermal Properties                             | Metric                                             | English                                              | Comments                         |
|------------------------------------------------|----------------------------------------------------|------------------------------------------------------|----------------------------------|
| CTE, linear, Parallel to Flow                  | 95.1 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C | 52.8 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D696                        |
| CTE, linear, Transverse to Flow                | 64.8 Âµm/m-Â°C<br>@Temperature -30.0 -<br>30.0 Â°C | 36.0 Âµin/in-Â°F<br>@Temperature -22.0 -<br>86.0 Â°F | ASTM D696                        |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 163 Â°C                                            | 325 Â°F                                              | Flatw 80*10*4 sp=64mm; ISO 75/Bf |
|                                                | 183 Â°C<br>@Thickness 3.20 mm                      | 361 Â°F<br>@Thickness 0.126 in                       | unannealed; ASTM D648            |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 161 Â°C                                            | 322 Â°F                                              | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|                                                | 161 Â°C<br>@Thickness 3.20 mm                      | 322 Â°F<br>@Thickness 0.126 in                       | unannealed; ASTM D648            |

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