

## SABIC Innovative Plastics LNP LUBRICOMP KL004A Acetal Homopolymer

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Homopolymer, Unreinforced

### Material Notes:

LNP LUBRICOMP\* KL004A is a compound based on Acetal Homopolymer resin containing 20% 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-KL004A-Acetal-Homopolymer.php](http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-LNP-LUBRICOMP-KL004A-Acetal-Homopolymer.php)

| Physical Properties               | Metric               | English                   | Comments                           |
|-----------------------------------|----------------------|---------------------------|------------------------------------|
| Density                           | 1.52 g/cc            | 0.0549 lb/in <sup>3</sup> | ASTM D792                          |
|                                   | 1.52 g/cc            | 0.0549 lb/in <sup>3</sup> | ISO 1183                           |
| Moisture Absorption               | 0.230 %              | 0.230 %                   | 50% RH, 24 hrs; ASTM D570          |
|                                   | 0.370 %              | 0.370 %                   | 23 <sup>o</sup> C / 50% RH; ISO 62 |
| Linear Mold Shrinkage, Flow       | 0.020 - 0.0219 cm/cm | 0.020 - 0.0219 in/in      | ISO 294                            |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                                    |
|                                   | 0.020 - 0.022 cm/cm  | 0.020 - 0.022 in/in       | ASTM D955                          |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                                    |
| Linear Mold Shrinkage, Transverse | 0.020 - 0.0219 cm/cm | 0.020 - 0.0219 in/in      | ISO 294                            |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                                    |
|                                   | 0.020 - 0.022 cm/cm  | 0.020 - 0.022 in/in       | ASTM D955                          |
|                                   | @Time 86400 sec      | @Time 24.0 hour           |                                    |

| Mechanical Properties     | Metric   | English   | Comments             |
|---------------------------|----------|-----------|----------------------|
| Tensile Strength at Break | 50.0 MPa | 7250 psi  | ISO 527              |
|                           | 56.0 MPa | 8120 psi  | ASTM D638            |
| Elongation at Break       | 9.4 %    | 9.4 %     | ISO 527              |
|                           | 11.4 %   | 11.4 %    | ASTM D638            |
| Tensile Modulus           | 2.55 GPa | 370 ksi   | 50 mm/min; ASTM D638 |
|                           | 2.70 GPa | 392 ksi   | 1 mm/min; ISO 527    |
| Flexural Strength         | 86.0 MPa | 12500 psi | ASTM D790            |
|                           | 86.0 MPa | 12500 psi | ISO 178              |

| Flexural Modulus<br>Mechanical Properties | 2.62 GPa<br>Metric                           | 380 ksi<br>English   | ASTM D790<br>Comments                            |
|---|--|--|--|
|   | 2.90 GPa                                     | 421 ksi  | ISO 178  |
| Izod Impact, Notched                      | 0.420 J/cm                                   | 0.787 ft-lb/in   | ASTM D256  |
| Izod Impact, Unnotched                    | 5.60 J/cm                                    | 10.5 ft-lb/in  | ASTM D4812                                       |
| Izod Impact, Notched (ISO)                | 4.00 kJ/m <sup>2</sup>                       | 1.90 ft-lb/in <sup>2</sup>                                 | 80*10*4; ISO 180/1A                              |
| Izod Impact, Unnotched (ISO)              | 39.0 kJ/m <sup>2</sup>                       | 18.6 ft-lb/in <sup>2</sup>                                 | 80*10*4; ISO 180/1U                              |
| Dart Drop, Total Energy                   | 7.00 J                                       | 5.16 ft-lb   | Instrumented Impact Energy @ peak;<br>ASTM D3763 |
| Coefficient of Friction, Dynamic          | 0.22   | 0.22   | ASTM D3702 Modified                              |
| Coefficient of Friction, Static           | 0.090  | 0.090  | ASTM D3702 Modified                              |
| K (wear) Factor                           | 24.2 x 10 <sup>-8</sup> mm <sup>3</sup> /N-M | 12.0 x 10 <sup>-10</sup> in <sup>3</sup> -<br>min/ft-lb-hr | Washer; ASTM D3702 Modified                      |

| Thermal Properties                             | Metric                        | English                       | Comments                         |
|--|-------------------------------|-------------------------------|----------------------------------|
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 98.0 °C                       | 208 °F                        | Flatw 80*10*4 sp=64mm; ISO 75/Af |
|  | 95.0 °C<br>@Thickness 3.20 mm | 203 °F<br>@Thickness 0.126 in | unannealed; ASTM D648            |

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