



## LNP™ LUBRILOY™ Compound K2000

### Americas: COMMERCIAL

Also known as: LNP™ LUBRILOY™ Compound K

Product reorder name: K2000

LNP LUBRILOY™ K2000 is a compound based on Acetal resin containing Proprietary Lubricant. Added feature of this material is: Wear Resistant.

| TYPICAL PROPERTIES <sup>1</sup>         | TYPICAL VALUE | Unit                | Standard    |
|-----------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                       |               |                     |             |
| Tensile Stress, yield                   | 560           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, break                   | 520           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, yield                   | 9.3           | %                   | ASTM D 638  |
| Tensile Strain, break                   | 32.4          | %                   | ASTM D 638  |
| Tensile Modulus, 50 mm/min              | 21000         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress                         | 850           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus                        | 24700         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield                   | 60            | MPa                 | ISO 527     |
| Tensile Stress, break                   | 59            | MPa                 | ISO 527     |
| Tensile Strain, yield                   | 9             | %                   | ISO 527     |
| Tensile Strain, break                   | 13.3          | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min               | 2560          | MPa                 | ISO 527     |
| Flexural Stress                         | 65            | MPa                 | ISO 178     |
| Flexural Modulus                        | 2420          | MPa                 | ISO 178     |
| <b>IMPACT</b>                           |               |                     |             |
| Izod Impact, unnotched, 23°C            | 138           | cm-kgf/cm           | ASTM D 4812 |
| Izod Impact, notched, 23°C              | 7             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Energy @ peak, 23°C | 65            | cm-kgf              | ASTM D 3763 |
| Multiaxial Impact                       | 8             | cm-kgf              | ISO 6603    |
| Izod Impact, unnotched 80*10*4 +23°C    | 48            | kJ/m <sup>2</sup>   | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C      | 6             | kJ/m <sup>2</sup>   | ISO 180/1A  |
| <b>THERMAL</b>                          |               |                     |             |
| HDT, 0.45 MPa, 3.2 mm, unannealed       | 158           | °C                  | ASTM D 648  |



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|---------------------------------------|---------------|-------------------------------------------------|----------------------|
| <b>THERMAL</b>                        |               |                                                 |                      |
| HDT, 1.82 MPa, 3.2mm, unannealed      | 110           | °C                                              | ASTM D 648           |
| CTE, -40°C to 40°C, flow              | 1.15E-04      | 1/°C                                            | ASTM E 831           |
| CTE, -40°C to 40°C, xflow             | 1.11E-04      | 1/°C                                            | ASTM E 831           |
| CTE, -40°C to 40°C, flow              | 1.15E-04      | 1/°C                                            | ISO 11359-2          |
| CTE, -40°C to 40°C, xflow             | 1.11E-04      | 1/°C                                            | ISO 11359-2          |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 87            | °C                                              | ISO 75/Af            |
| <b>PHYSICAL</b>                       |               |                                                 |                      |
| Density                               | 1.4           | g/cm <sup>3</sup>                               | ASTM D 792           |
| Moisture Absorption, 50% RH, 24 hrs   | 0.33          | %                                               | ASTM D 570           |
| Mold Shrinkage, flow, 24 hrs (5)      | 2.2           | %                                               | ASTM D 955           |
| Mold Shrinkage, xflow, 24 hrs (5)     | 2.3           | %                                               | ASTM D 955           |
| Mold Shrinkage, flow, 24 hrs (5)      | 2.21          | %                                               | ISO 294              |
| Mold Shrinkage, xflow, 24 hrs (5)     | 2.14          | %                                               | ISO 294              |
| Wear Factor Washer                    | 10            | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr | ASTM D 3702 Modified |
| Dynamic COF                           | 0.38          | -                                               | ASTM D 3702 Modified |
| Static COF                            | 0.24          | -                                               | ASTM D 3702 Modified |
| Density                               | 1.4           | g/cm <sup>3</sup>                               | ISO 1183             |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 80            | °C   |
| Drying Time                 | 4             | hrs  |
| Melt Temperature            | 200 - 215     | °C   |
| Front - Zone 3 Temperature  | 210 - 220     | °C   |
| Middle - Zone 2 Temperature | 195 - 205     | °C   |
| Rear - Zone 1 Temperature   | 175 - 190     | °C   |
| Mold Temperature            | 80 - 110      | °C   |
| Back Pressure               | 0.2 - 0.3     | MPa  |
| Screw Speed                 | 30 - 60       | rpm  |