# LNP™ LUBRILOY™ COMPOUND R2000I

REGION ASIA

## DESCRIPTION

LNP LUBRILOY* R2000I is a compound based on Nylon 66 resin containing Proprietary Lubricant. Added features of this material include: High Impact, Wear Resistant.

## TYPICAL PROPERTY VALUES

Revision 20190801

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yield | 59 | MPa | ASTM D 638 |
| Tensile Stress, break | 53 | MPa | ASTM D 638 |
| Tensile Strain, yield | 8 | % | ASTM D 638 |
| Tensile Strain, break | 31 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 2220 | MPa | ASTM D 638 |
| Flexural Stress | 80 | MPa | ASTM D 790 |
| Flexural Modulus | 2080 | MPa | ASTM D 790 |
| Tensile Stress, yield | 55 | MPa | ISO 527 |
| Tensile Stress, break | 54 | MPa | ISO 527 |
| Tensile Strain, yield | 16 | % | ISO 527 |
| Tensile Strain, break | 64 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2160 | MPa | ISO 527 |
| Flexural Stress | 74 | MPa | ISO 178 |
| Flexural Modulus | 2000 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, notched, 23°C | 427 | J/m | ASTM D 256 |
| Instrumented Impact Energy @ peak, 23°C | 76 | J | ASTM D 3763 |
| Multiaxial Impact | 65 | J | ISO 6603 |
| Izod Impact, unnotched 80*10*4 +23°C | 137 | kJ/m² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 19 | kJ/m² | ISO 180/1A |
| THERMAL | | | |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 206 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 63 | °C | ASTM D 648 |
| CTE, -40°C to 40°C, flow | 1.21E-04 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, xflow | 1.12E-04 | 1/°C | ASTM E 831 |
| CTE, -40°C to 40°C, flow | 1.21E-04 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 1.13E-04 | 1/°C | ISO 11359-2 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 188 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 67 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Density | 1.1 | g/cm³ | ASTM D 792 |
| Moisture Absorption, 50% RH, 24 hrs | 0.7 | % | ASTM D 570 |
| Mold Shrinkage, flow, 24 hrs | 2.4 – 2.6 | % | ASTM D 955 |
| Mold Shrinkage, xflow, 24 hrs | 2.4 – 2.6 | % | ASTM D 955 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Mold Shrinkage, flow, 24 hrs | 2.43 – 2.6 | % | ISO 294 |
| Mold Shrinkage, xflow, 24 hrs | 2.43 – 2.43 | % | ISO 294 |
| Wear Factor Washer | 8 | 10^-10 in^5-min/ft-lb-hr | ASTM D 3702 Modified: Manual |
| Dynamic COF | 0.31 | - | ASTM D 3702 Modified: Manual |
| Static COF | 0.18 | - | ASTM D 3702 Modified: Manual |
| Density | 1.1 | g/cm³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 1.12 | % | ISO 62 |
| INJECTION MOLDING | | | |
| Drying Temperature | 80 | °C | |
| Drying Time | 4 | hrs | |
| Maximum Moisture Content | 0.15 – 0.25 | % | |
| Melt Temperature | 280 – 305 | °C | |
| Front - Zone 3 Temperature | 295 – 305 | °C | |
| Middle - Zone 2 Temperature | 280 – 295 | °C | |
| Rear - Zone 1 Temperature | 265 – 275 | °C | |
| Mold Temperature | 95 – 110 | °C | |
| Back Pressure | 0.2 – 0.3 | MPa | |
| Screw Speed | 30 – 60 | rpm | |

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