# LNP™ LUBRILOY™ Compound RX18020

REGION EUROPE

## DESCRIPTION

LNP™ LUBRILOY™ RX18020 is a compound based on PA 66 resin containing Glass Fiber, Proprietary Lubricant. Added features include; Internally Lubricated,

| GENERAL INFORMATION | |
|---|---|
| **Applications** | Structure |
| **Features** | Wear resistant, High stiffness/Strength, No PFAS intentionally added |
| **Fillers** | Glass Fiber (Total fluorine >50ppm only from inorganic fluorine) |
| **Polymer Types** | Polyamide 66 (Nylon 66) |
| **Processing Techniques** | Injection Molding |

## TYPICAL PROPERTY VALUES

Revision 20240926

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Modulus, 1 mm/min** | 6100 | MPa | ISO 527 |
| **Tensile Stress, break, 5 mm/min** | 121 | MPa | ISO 527 |
| **Tensile Strain, break, 5 mm/min** | 4 | % | ISO 527 |
| **Flexural Modulus, 2 mm/min** | 4800 | MPa | ISO 178 |
| **Flexural Strength, 2 mm/min** | 174 | MPa | ISO 178 |
| **Tensile Modulus, 5 mm/min** | 6200 | MPa | ASTM D638 |
| **Tensile Stress, brk, Type I, 5 mm/min** | 118 | MPa | ASTM D638 |
| **Tensile Strain, brk, Type I, 5 mm/min** | 4 | % | ASTM D638 |
| **Flexural Modulus, 1.3 mm/min, 50 mm span** | 4600 | MPa | ASTM D790 |
| **Flexural Strength, 1.3 mm/min, 50 mm span** | 160 | MPa | ASTM D790 |
| IMPACT [1] | | | |
| **Izod Impact, notched 80*10*4 +23°C** | 8 | kJ/m² | ISO 180/1A |
| **Izod Impact, unnotched 80*10*4 +23°C** | 53 | kJ/m² | ISO 180/1U |
| **Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm** | 8 | kJ/m² | ISO 179/1eA |
| **Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm** | 65 | kJ/m² | ISO 179/1eU |
| **Izod Impact, notched, 23°C** | 60 | J/m | ASTM D256 |
| **Izod Impact, unnotched, 23°C** | 757 | J/m | ASTM D4812 |
| THERMAL [1] | | | |
| **HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm** | 231 | °C | ISO 75/Af |
| **HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm** | 255 | °C | ISO 75/Bf |
| **Vicat Softening Temp, Rate B/50** | 244 | °C | ISO 306 |
| **Vicat Softening Temp, Rate B/120** | 246 | °C | ISO 306 |
| **CTE, 23°C to 60°C, flow** | 3.8E-05 | 1/°C | ISO 11359-2 |
| **CTE, 23°C to 60°C, xflow** | 9.6E-05 | 1/°C | ISO 11359-2 |
| **HDT, 1.82 MPa, 3.2mm, unannealed** | 247 | °C | ASTM D648 |
| **HDT, 0.45 MPa, 3.2 mm, unannealed** | 257 | °C | ASTM D648 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| PHYSICAL [1] | | | |
| Density | 1.21 | g/cm³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 0.2 – 0.4 | % | ISO 62 |
| Melt Volume Rate, MVR at 300°C/1.2 kg | 69 | cm³/10 min | ISO 1133 |
| Specific Gravity | 1.21 | - | ASTM D792 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.1 – 0.2 | % | ASTM D570 |
| Wear Factor Washer | 8 | 10^-10 in^5-min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Dynamic COF | 0.34 | - | ASTM D3702 Modified: Manual |
| Static COF | 0.51 | - | ASTM D3702 Modified: Manual |
| Mold Shrinkage, flow | 0.5 – 0.7 | % | SABIC method |
| Mold Shrinkage, xflow | 1.1 – 1.3 | % | SABIC method |
| FLAME CHARACTERISTICS [2] | | | |
| Glow Wire Ignitability Temperature, 1.5 mm | 700 | °C | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 1.0 mm | 700 | °C | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 0.8 mm | 700 | °C | IEC 60695-2-13 |
| Glow Wire Flammability Index, 1.5 mm | 675 | °C | IEC 60695-2-12 |
| Glow Wire Flammability Index, 1.0 mm | 675 | °C | IEC 60695-2-12 |
| Glow Wire Flammability Index, 0.8 mm | 675 | °C | IEC 60695-2-12 |
| INJECTION MOLDING [3] | | | |
| Drying Temperature | 95 – 100 | °C | |
| Drying Time | 6 – 8 | Hrs | |
| Drying Time (Cumulative) | 12 | Hrs | |
| Melt Temperature | 250 – 280 | °C | |
| Rear - Zone 1 Temperature | 240 – 260 | °C | |
| Middle - Zone 2 Temperature | 250 – 270 | °C | |
| Front - Zone 3 Temperature | 260 – 280 | °C | |
| Nozzle Temperature | 255 – 275 | °C | |
| Mold Temperature | 60 – 90 | °C | |
| Back Pressure | 0.3 – 0.7 | MPa | |
| Screw Speed | 60 – 100 | rpm | |
| Vent Depth | 0.025 – 0.076 | mm | |
| Shot to Cylinder Size | 40 – 60 | % | |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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