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# LNP™ LUBRILOY™ COMPOUND RX05498

RW-HI

## DESCRIPTION

LNP LUBRILOY RX05498 compound is based on Nylon 6/6 resin containing proprietary lubricant. Added features of this grade include: High Impact, Wear Resistant.

| GENERAL INFORMATION | |
|---|---|
| **Features** | Wear resistant, Impact resistant, No PFAS intentionally added |
| **Fillers** | Unreinforced |
| **Polymer Types** | Polyamide 66 (Nylon 66) |
| **Processing Techniques** | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Building and Construction | Building Component |
| Consumer | Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance |
| Electrical and Electronics | Mobile Phone - Computer - Tablets |
| Industrial | Electrical |

## TYPICAL PROPERTY VALUES

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Stress, yield** | 59 | MPa | ASTM D638 |
| **Tensile Stress, break** | 53 | MPa | ASTM D638 |
| **Tensile Strain, yield** | 8 | % | ASTM D638 |
| **Tensile Strain, break** | 31 | % | ASTM D638 |
| **Tensile Modulus, 50 mm/min** | 2220 | MPa | ASTM D638 |
| **Flexural Stress** | 80 | MPa | ASTM D790 |
| **Flexural Modulus** | 2080 | MPa | ASTM D790 |
| **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 [1] | | | |
| **Izod Impact, notched, 23°C** | 427 | J/m | ASTM D256 |
| **Instrumented Dart Impact Energy @ peak, 23°C** | 76 | J | ASTM D3763 |
| **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 |

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| THERMAL [1] | | | |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 206 | °C | ASTM D648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 63 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 1.21E-04 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 1.12E-04 | 1/°C | ASTM E831 |
| 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 [1] | | | |
| Density | 1.1 | g/cm³ | ASTM D792 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.7 | % | ASTM D570 |
| Mold Shrinkage, flow, 24 hrs [2] | 2.4 – 2.6 | % | ASTM D955 |
| Mold Shrinkage, xflow, 24 hrs [2] | 2.4 – 2.6 | % | ASTM D955 |
| Mold Shrinkage, flow, 24 hrs [2] | 2.43 – 2.6 | % | ISO 294 |
| Mold Shrinkage, xflow, 24 hrs [2] | 2.43 – 2.6 | % | ISO 294 |
| Wear Factor Washer | 8 | 10^-10 in^5-min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Dynamic COF | 0.31 | - | ASTM D3702 Modified: Manual |
| Static COF | 0.18 | - | ASTM D3702 Modified: Manual |
| Density | 1.1 | g/cm³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 1.12 | % | ISO 62 |
| INJECTION MOLDING [3] | | | |
| 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 | |