# LNP™ LUBRICOMP™ COMPOUND RAL32

RAL-4032

## DESCRIPTION

LNP* LUBRICOMP* RAL32 is a compound based on Nylon 66 resin containing 10% Aramid, 15% PTFE. Added feature of this grade is: Wear Resistant.

## TYPICAL PROPERTY VALUES

Revision 20191218

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, brk, Type I, 5 mm/min | 83 | MPa | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 5.9 | % | ASTM D 638 |
| Tensile Modulus, 5 mm/min | 3840 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 124 | MPa | ASTM D 790 |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 123 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 3480 | MPa | ASTM D 790 |
| Tensile Stress, break, 5 mm/min | 78 | MPa | ISO 527 |
| Tensile Strain, break, 5 mm/min | 6.2 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 3860 | MPa | ISO 527 |
| Flexural Stress | 113 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 3470 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 472 | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 46 | J/m | ASTM D 256 |
| Multiaxial Impact | 1 | J | ISO 6603 |
| Instrumented Impact Total Energy, 23°C | 3 | J | ASTM D 3763 |
| Izod Impact, unnotched 80*10*4 +23°C | 28 | kJ/m² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 3 | kJ/m² | ISO 180/1A |
| THERMAL | | | |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 254 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 208 | °C | ASTM D 648 |
| CTE, -30°C to 30°C, flow | 6.3E-05 | 1/°C | ASTM D 696 |
| CTE, -30°C to 30°C, xflow | 8.2E-05 | 1/°C | ASTM D 696 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 242 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 115 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.25 | - | ASTM D 792 |
| Density | 1.25 | g/cm³ | ASTM D 792 |
| Moisture Absorption, 50% RH, 24 hrs | 0.74 | % | ASTM D 570 |
| Mold Shrinkage, flow, 24 hrs | 0.9 – 2 | % | ASTM D 955 |
| Mold Shrinkage, xflow, 24 hrs | 1 – 3 | % | ASTM D 955 |
| Wear Factor Washer | 12 | 10^-10 in^5-min/ft-lb-hr | ASTM D 3702 Modified: Manual |
| Wear Factor Ring | 0 | 10^-10 in^5-min/ft-lb-hr | ASTM D 3702 Modified: Manual |
| Dynamic COF | 0.34 | - | ASTM D 3702 Modified: Manual |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Static COF | 0.3 | - | ASTM D 3702 Modified: Manual |
| Moisture Absorption (23°C / 50% RH) | 1.1 | % | ISO 62 |
| INJECTION MOLDING | | | |
| Drying Temperature | 80 | °C | |
| Drying Time | 4 | hrs | |
| Maximum Moisture Content | 0.15 – 0.25 | % | |
| Melt Temperature | 275 – 290 | °C | |
| Front - Zone 3 Temperature | 295 – 305 | °C | |
| Middle - Zone 2 Temperature | 280 – 295 | °C | |
| Rear - Zone 1 Temperature | 265 – 275 | °C | |
| Mold Temperature | 80 – 95 | °C | |
| Back Pressure | 0.2 – 0.3 | MPa | |
| Screw Speed | 30 – 60 | rpm | |

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