# LNP™ LUBRICOMP™ COMPOUND KFI12

KFL-4412

## DESCRIPTION

LNP LUBRICOMP* KFI12 is a compound based on Acetal Copolymer resin containing 10% Glass Fiber, 2% Silicone. Added feature of this grade is: Wear Resistant.

## TYPICAL PROPERTY VALUES

Revision 20191210

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL | | | |
| Tensile Stress, yld, Type I, 5 mm/min | 62 | MPa | ASTM D 638 |
| Tensile Stress, brk, Type I, 5 mm/min | 56 | MPa | ASTM D 638 |
| Tensile Strain, yld, Type I, 5 mm/min | 2.3 | % | ASTM D 638 |
| Tensile Strain, brk, Type I, 5 mm/min | 3.3 | % | ASTM D 638 |
| Tensile Modulus, 50 mm/min | 4910 | MPa | ASTM D 638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 91 | MPa | ASTM D 790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 4070 | MPa | ASTM D 790 |
| Tensile Stress, yield, 5 mm/min | 62 | MPa | ISO 527 |
| Tensile Stress, break, 5 mm/min | 58 | MPa | ISO 527 |
| Tensile Strain, yield, 5 mm/min | 2.3 | % | ISO 527 |
| Tensile Strain, break, 5 mm/min | 2.6 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 4780 | MPa | ISO 527 |
| Flexural Stress | 91 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 4140 | MPa | ISO 178 |
| IMPACT | | | |
| Izod Impact, unnotched, 23°C | 417 | J/m | ASTM D 4812 |
| Izod Impact, notched, 23°C | 54 | J/m | ASTM D 256 |
| Multiaxial Impact | 2 | J | ISO 6603 |
| Instrumented Impact Total Energy, 23°C | 5 | J | ASTM D 3763 |
| Izod Impact, unnotched 80*10*3 +23°C | 26 | kJ/m² | ISO 180/1U |
| Izod Impact, notched 80*10*4 +23°C | 5 | kJ/m² | ISO 180/1A |
| THERMAL | | | |
| HDT, 0.45 MPa, 3.2 mm, unannealed | 163 | °C | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 161 | °C | ASTM D 648 |
| CTE, -30°C to 30°C, flow | 8.3E-05 | 1/°C | ASTM D 696 |
| CTE, -30°C to 30°C, xflow | 9.E-05 | 1/°C | ASTM D 696 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 162 | °C | ISO 75/Bf |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 159 | °C | ISO 75/Af |
| PHYSICAL | | | |
| Specific Gravity | 1.44 | - | ASTM D 792 |
| Density | 1.44 | g/cm³ | ASTM D 792 |
| Moisture Absorption, 50% RH, 24 hrs | 0.25 | % | ASTM D 570 |
| Moisture Absorption (23°C / 50% RH) | 0.34 | % | ISO 62 |
| INJECTION MOLDING | | | |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| 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 | |

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