

# LNP<sup>TM</sup> LUBRICOMP<sup>TM</sup> COMPOUND UX06427

UCL-4036 A HS HW

## DESCRIPTION

LNP<sup>TM</sup> LUBRICOMP<sup>TM</sup> UX06427 is a compound based on PPA containing 30% Carbon Fiber, 15% PTFE. Added features of this grade include: Heat Stabilized, Hot Water Moldable, Wear Resistant.

## TYPICAL PROPERTY VALUES

Revision 20191210

| PROPERTIES                                   | TYPICAL VALUES | UNITS  | TEST METHODS                 |
|--|----------------|--|------------------------------|
| <b>MECHANICAL</b>                            |                |  |                              |
| Tensile Stress, brk, Type I, 5 mm/min        | 224            | MPa  | ASTM D 638                   |
| Tensile Strain, brk, Type I, 5 mm/min        | 1.2            | %  | ASTM D 638                   |
| Tensile Modulus, 50 mm/min                   | 25200          | MPa  | ASTM D 638                   |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 311            | MPa  | ASTM D 790                   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 17200          | MPa  | ASTM D 790                   |
| Tensile Stress, break, 5 mm/min              | 227            | MPa  | ISO 527                      |
| Tensile Strain, break, 5 mm/min              | 1.3            | %  | ISO 527                      |
| Tensile Modulus, 1 mm/min                    | 22770          | MPa  | ISO 527                      |
| Flexural Modulus, 2 mm/min                   | 19640          | MPa  | ISO 178                      |
| <b>IMPACT</b>                                |                |  |                              |
| Izod Impact, unnotched, 23°C                 | 646            | J/m  | ASTM D 4812                  |
| Izod Impact, notched, 23°C                   | 53             | J/m  | ASTM D 256                   |
| Multiaxial Impact                            | 2              | J  | ISO 6603                     |
| Izod Impact, unnotched 80*10*4 +23°C         | 40             | kJ/m <sup>2</sup>                                | ISO 180/1U                   |
| Izod Impact, notched 80*10*4 +23°C           | 5              | kJ/m <sup>2</sup>                                | ISO 180/1A                   |
| <b>THERMAL</b>                               |                |  |                              |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 296            | °C   | ASTM D 648                   |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 284            | °C   | ASTM D 648                   |
| CTE, -30°C to 30°C, flow                     | 2.2E-05        | 1/°C   | ASTM D 696                   |
| CTE, -30°C to 30°C, xflow                    | 3.4E-05        | 1/°C   | ASTM D 696                   |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm       | 298            | °C   | ISO 75/Bf                    |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 284            | °C   | ISO 75/Af                    |
| <b>PHYSICAL</b>                              |                |  |                              |
| Density                                      | 1.42           | g/cm <sup>3</sup>                                | ASTM D 792                   |
| Moisture Absorption, 50% RH, 24 hrs          | 0.4            | %  | ASTM D 570                   |
| Mold Shrinkage, flow, 24 hrs                 | 0.06 – 0.09    | %  | ASTM D 955                   |
| Mold Shrinkage, xflow, 24 hrs                | 0.6 – 0.9      | %  | ASTM D 955                   |
| Wear Factor Washer                           | 26             | 10 <sup>-10</sup> in <sup>4</sup> 5-min/ft-lb-hr | ASTM D 3702 Modified: Manual |
| Dynamic COF                                  | 0.34           | -  | ASTM D 3702 Modified: Manual |
| Static COF                                   | 0.33           | -  | ASTM D 3702 Modified: Manual |
| Density                                      | 1.41           | g/cm <sup>3</sup>                                | ISO 1183                     |
| Moisture Absorption (23°C / 50% RH)          | 0.6            | %  | ISO 62                       |
| <b>INJECTION MOLDING</b>                     |                |  |                              |
| Drying Temperature                           | 120            | °C   |                              |

| PROPERTIES                 | TYPICAL VALUES | UNITS | TEST METHODS |
|----------------------------|----------------|-------|--------------|
| Drying Time                | 4              | hrs   |              |
| Maximum Moisture Content   | 0.06           | %     |              |
| Minimum Moisture Content   | 0.03           | %     |              |
| Melt Temperature           | 330 – 345      | °C    |              |
| Front - Zone 3 Temperature | 325 – 330      | °C    |              |
| Rear - Zone 1 Temperature  | 320 – 325      | °C    |              |
| Mold Temperature           | 65 – 95        | °C    |              |
| Back Pressure              | 0.4            | MPa   |              |
| Screw Speed                | 30 – 60        | rpm   |              |

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