



## LNP™ LUBRICOMP™ Compound ZP001XXP

### Americas: COMMERCIAL

Also known as: LNP™ LUBRICOMP™ Compound ZL-4510

Product reorder name: ZP001XXP

LNP LUBRICOMP ZP001XXP is a compound based on PPE+PS resin containing 5% PTFE/Silicone. Added features of this material include: Wear Resistant.

| TYPICAL PROPERTIES <sup>1</sup>          | TYPICAL VALUE | Unit                | Standard    |
|------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                        |               |                     |             |
| Tensile Stress, yld, Type I, 5 mm/min    | 490           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, brk, Type I, 5 mm/min    | 490           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, yld, Type I, 5 mm/min    | 3.3           | %                   | ASTM D 638  |
| Tensile Strain, brk, Type I, 5 mm/min    | 30            | %                   | ASTM D 638  |
| Tensile Modulus, 50 mm/min               | 24400         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 24700         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield, 5 mm/min          | 45            | MPa                 | ISO 527     |
| Tensile Stress, break, 5 mm/min          | 48            | MPa                 | ISO 527     |
| Tensile Strain, yield, 5 mm/min          | 3.2           | %                   | ISO 527     |
| Tensile Strain, break, 5 mm/min          | 31            | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                | 2200          | MPa                 | ISO 527     |
| Flexural Stress                          | 73            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min               | 2290          | MPa                 | ISO 178     |
| <b>IMPACT</b>                            |               |                     |             |
| Izod Impact, unnotched, 23°C             | 106           | cm-kgf/cm           | ASTM D 4812 |
| Izod Impact, notched, 23°C               | 14            | cm-kgf/cm           | ASTM D 256  |
| Multiaxial Impact                        | 66            | cm-kgf              | ISO 6603    |
| Instrumented Impact Total Energy, 23°C   | 185           | cm-kgf              | ASTM D 3763 |
| Izod Impact, unnotched 80*10*4 +23°C     | 59            | kJ/m <sup>2</sup>   | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C       | 13            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| <b>THERMAL</b>                           |               |                     |             |
| HDT, 0.45 MPa, 3.2 mm, unannealed        | 130           | °C                  | ASTM D 648  |
| HDT, 1.82 MPa, 3.2mm, unannealed         | 118           | °C                  | ASTM D 648  |



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|----------------------------------------|---------------|-------------------------------------------------|----------------------|
| <b>THERMAL</b>                         |               |                                                 |                      |
| CTE, -30°C to 30°C, flow               | 7.8E-05       | 1/°C                                            | ASTM D 696           |
| CTE, -30°C to 30°C, xflow              | 7.8E-05       | 1/°C                                            | ASTM D 696           |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 129           | °C                                              | ISO 75/Bf            |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm  | 116           | °C                                              | ISO 75/Af            |
| <b>PHYSICAL</b>                        |               |                                                 |                      |
| Specific Gravity                       | 1.07          | -                                               | ASTM D 792           |
| Density                                | 1.06          | g/cm <sup>3</sup>                               | ASTM D 792           |
| Moisture Absorption, 50% RH, 24 hrs    | 0.11          | %                                               | ASTM D 570           |
| Mold Shrinkage, flow, 24 hrs (5)       | 0.6 - 0.8     | %                                               | ASTM D 955           |
| Mold Shrinkage, xflow, 24 hrs (5)      | 0.8 - 1       | %                                               | ASTM D 955           |
| Wear Factor Washer                     | 272           | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr | ASTM D 3702 Modified |
| Wear Factor Ring                       | 0             | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr | ASTM D 3702 Modified |
| Dynamic COF                            | 0.3           | -                                               | ASTM D 3702 Modified |
| Static COF                             | 0.27          | -                                               | ASTM D 3702 Modified |
| Moisture Absorption (23°C / 50% RH)    | 0.15          | %                                               | ISO 62               |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 120           | °C   |
| Drying Time                 | 4             | hrs  |
| Melt Temperature            | 300 - 305     | °C   |
| Front - Zone 3 Temperature  | 300 - 310     | °C   |
| Middle - Zone 2 Temperature | 290 - 300     | °C   |
| Rear - Zone 1 Temperature   | 275 - 290     | °C   |
| Mold Temperature            | 80 - 110      | °C   |
| Back Pressure               | 0.2 - 0.3     | MPa  |
| Screw Speed                 | 30 - 60       | rpm  |