

# LNPT<sup>™</sup> LUBRICOMP<sup>™</sup> COMPOUND UCL36S

UCL-4036 HS

## DESCRIPTION

LNP LUBRICOMP UCL36S compound is based on Polyphthalamide (PPA) resin containing 15% PTFE, 30% carbon fiber. Added features of this grade include: Internally Lubricated, Wear Resistant, Heat Stabilized, Electrically Conductive.

### GENERAL INFORMATION

|                       |                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Features              | Electrically Conductive, Heat Stabilized, Wear resistant, Carbon fiber filled, High stiffness/Strength, High temperature resistance |
| Fillers               | Carbon Fiber, PTFE                                                                                                                  |
| Polymer Types         | Polyphthalamide (PPA)                                                                                                               |
| Processing Techniques | Injection Molding                                                                                                                   |

### INDUSTRY

Automotive  
Consumer  
Electrical and Electronics

### SUB INDUSTRY

Automotive Under the Hood  
Home Appliances, Commercial Appliance  
Electronic Components, Mobile Phone - Computer - Tablets

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                           | TYPICAL VALUES | UNITS                                              | TEST METHODS                |
|--------------------------------------|----------------|----------------------------------------------------|-----------------------------|
| <b>MECHANICAL <sup>(1)</sup></b>     |                |                                                    |                             |
| Tensile Stress, break                | 216            | MPa                                                | ASTM D638                   |
| Tensile Strain, break                | 1.6            | %                                                  | ASTM D638                   |
| Tensile Modulus, 50 mm/min           | 20130          | MPa                                                | ASTM D638                   |
| Flexural Stress                      | 324            | MPa                                                | ASTM D790                   |
| Flexural Modulus                     | 18820          | MPa                                                | ASTM D790                   |
| Tensile Stress, break                | 214            | MPa                                                | ISO 527                     |
| Tensile Strain, break                | 1.2            | %                                                  | ISO 527                     |
| Flexural Stress                      | 334            | MPa                                                | ISO 178                     |
| Flexural Modulus                     | 22700          | MPa                                                | ISO 178                     |
| <b>IMPACT <sup>(1)</sup></b>         |                |                                                    |                             |
| Izod Impact, unnotched, 23°C         | 939            | J/m                                                | ASTM D4812                  |
| Izod Impact, notched, 23°C           | 96             | J/m                                                | ASTM D256                   |
| Izod Impact, unnotched 80°10°4 +23°C | 39             | kJ/m <sup>2</sup>                                  | ISO 180/1U                  |
| Izod Impact, notched 80°10°4 +23°C   | 8              | kJ/m <sup>2</sup>                                  | ISO 180/1A                  |
| <b>THERMAL <sup>(1)</sup></b>        |                |                                                    |                             |
| HDT, 1.82 MPa, 3.2mm, unannealed     | 279            | °C                                                 | ASTM D648                   |
| <b>PHYSICAL <sup>(1)</sup></b>       |                |                                                    |                             |
| Density                              | 1.41           | g/cm <sup>3</sup>                                  | ASTM D792                   |
| Wear Factor Washer                   | 16             | 10 <sup>-4</sup> -10 in <sup>4</sup> -min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Dynamic COF                          | 0.36           | -                                                  | ASTM D3702 Modified: Manual |

| PROPERTIES                                  | TYPICAL VALUES                    | UNITS | TEST METHODS                |
|---------------------------------------------|-----------------------------------|-------|-----------------------------|
| Static COF                                  | 0.27                              | -     | ASTM D3702 Modified: Manual |
| <b>ELECTRICAL <sup>(1)</sup></b>            |                                   |       |                             |
| Surface Resistivity                         | 1.E+02 – 1.E+06                   | Ω     | ASTM D257                   |
| <b>FLAME CHARACTERISTICS <sup>(2)</sup></b> |                                   |       |                             |
| UL Yellow Card Link                         | <a href="#">E121562-101345286</a> | -     | -                           |
| UL Yellow Card Link 2                       | <a href="#">E207780-101345253</a> | -     | -                           |
| UL Recognized, 94HB Flame Class Rating      | 1.5                               | mm    | UL 94                       |
| <b>INJECTION MOLDING <sup>(3)</sup></b>     |                                   |       |                             |
| Drying Temperature                          | 120                               | °C    |                             |
| Drying Time                                 | 4                                 | Hrs   |                             |
| Maximum Moisture Content                    | 0.15                              | %     |                             |
| Melt Temperature                            | 315 – 330                         | °C    |                             |
| Front - Zone 3 Temperature                  | 325 – 340                         | °C    |                             |
| Middle - Zone 2 Temperature                 | 315 – 325                         | °C    |                             |
| Rear - Zone 1 Temperature                   | 310 – 320                         | °C    |                             |
| Mold Temperature                            | 150 – 170                         | °C    |                             |
| Back Pressure                               | 0.2 – 0.3                         | MPa   |                             |
| Screw Speed                                 | 30 – 60                           | rpm   |                             |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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