

# LNPT<sup>™</sup> LUBRICOMP<sup>™</sup> COMPOUND PFL36

PFL-4036

REGION EUROPE

## DESCRIPTION

LNP LUBRICOMP PFL36 compound is based on Nylon 6 resin containing 30% glass fiber, 15% PTFE. Added features of this grade include: Wear Resistant.

### GENERAL INFORMATION

|                       |                                         |
|-----------------------|-----------------------------------------|
| Features              | Wear resistant, High stiffness/Strength |
| Fillers               | Glass Fiber, PTFE                       |
| Polymer Types         | Polyamide 6 (Nylon 6)                   |
| Processing Techniques | Injection Molding                       |

### INDUSTRY

Building and Construction  
Consumer  
Electrical and Electronics  
Industrial

### SUB INDUSTRY

Building Component  
Sport/Leisure, Personal Accessory, Home Appliances, Commercial Appliance  
Mobile Phone - Computer - Tablets  
Electrical

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|----------------------------------------------|----------------|-------------------|--------------|
| <b>MECHANICAL <sup>(1)</sup></b>             |                |                   |              |
| Tensile Stress, yield, 5 mm/min              | 155            | MPa               | ISO 527      |
| Tensile Stress, break, 5 mm/min              | 155            | MPa               | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 10200          | MPa               | ISO 527      |
| Tensile Strain, yield, 5 mm/min              | 2.9            | %                 | ISO 527      |
| Tensile Strain, break, 5 mm/min              | 3.2            | %                 | ISO 527      |
| Flexural Stress, yield, 2 mm/min             | 235            | MPa               | ISO 178      |
| Flexural Stress, break, 2 mm/min             | 235            | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                   | 8600           | MPa               | ISO 178      |
| Tensile Stress, yld, Type I, 5 mm/min        | 150            | MPa               | ASTM D638    |
| Tensile Stress, brk, Type I, 5 mm/min        | 150            | MPa               | ASTM D638    |
| Tensile Strain, yld, Type I, 5 mm/min        | 2.9            | %                 | ASTM D638    |
| Tensile Strain, brk, Type I, 5 mm/min        | 3.3            | %                 | ASTM D638    |
| Tensile Modulus, 5 mm/min                    | 10100          | MPa               | ASTM D638    |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 215            | MPa               | ASTM D790    |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 210            | MPa               | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 7500           | MPa               | ASTM D790    |
| <b>IMPACT <sup>(1)</sup></b>                 |                |                   |              |
| Izod Impact, notched 80°10°4 +23°C           | 12             | kJ/m <sup>2</sup> | ISO 180/1A   |
| Izod Impact, unnotched 80°10°4 +23°C         | 75             | kJ/m <sup>2</sup> | ISO 180/1U   |
| Izod Impact, notched, 23°C                   | 95             | J/m               | ASTM D256    |

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CHEMISTRY THAT MATTERS<sup>™</sup>

| PROPERTIES                                 | TYPICAL VALUES | UNITS                                          | TEST METHODS                |
|--------------------------------------------|----------------|------------------------------------------------|-----------------------------|
| Izod Impact, unnotched, 23°C               | 1000           | J/m                                            | ASTM D4812                  |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm | 11             | kJ/m <sup>2</sup>                              | ISO 179/1eA                 |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm | 75             | kJ/m <sup>2</sup>                              | ISO 179/1eU                 |
| <b>THERMAL <sup>(1)</sup></b>              |                |                                                |                             |
| Vicat Softening Temp, Rate B/50            | 210            | °C                                             | ISO 306                     |
| Vicat Softening Temp, Rate B/50            | 210            | °C                                             | ASTM D1525                  |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm     | 215            | °C                                             | ISO 75/Bf                   |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm      | 200            | °C                                             | ISO 75/Af                   |
| HDT, 0.45 MPa, 3.2 mm, unannealed          | 215            | °C                                             | ASTM D648                   |
| HDT, 1.82 MPa, 3.2mm, unannealed           | 205            | °C                                             | ASTM D648                   |
| CTE, -40°C to 40°C, flow                   | 2.40E-05       | 1/°C                                           | ISO 11359-2                 |
| CTE, -40°C to 40°C, xflow                  | 9.60E-05       | 1/°C                                           | ISO 11359-2                 |
| CTE, -40°C to 40°C, flow                   | 2.40E-05       | 1/°C                                           | ASTM E831                   |
| CTE, -40°C to 40°C, xflow                  | 9.60E-05       | 1/°C                                           | ASTM E831                   |
| <b>PHYSICAL <sup>(1)</sup></b>             |                |                                                |                             |
| Mold Shrinkage, flow <sup>(2) (3)</sup>    | 0.1            | %                                              | SABIC method                |
| Mold Shrinkage, xflow <sup>(2) (3)</sup>   | 0.7            | %                                              | SABIC method                |
| Wear Factor Washer                         | 18             | 10 <sup>-4</sup> in <sup>3</sup> /min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Dynamic COF                                | 0.67           | -                                              | ASTM D3702 Modified: Manual |
| Static COF                                 | 0.87           | -                                              | ASTM D3702 Modified: Manual |
| <b>INJECTION MOLDING <sup>(4)</sup></b>    |                |                                                |                             |
| Drying Temperature                         | 80             | °C                                             |                             |
| Drying Time                                | 4              | Hrs                                            |                             |
| Maximum Moisture Content                   | 0.15 – 0.25    | %                                              |                             |
| Melt Temperature                           | 265 – 275      | °C                                             |                             |
| Front - Zone 3 Temperature                 | 275 – 290      | °C                                             |                             |
| Middle - Zone 2 Temperature                | 265 – 275      | °C                                             |                             |
| Rear - Zone 1 Temperature                  | 250 – 260      | °C                                             |                             |
| Mold Temperature                           | 80 – 95        | °C                                             |                             |
| Back Pressure                              | 0.3 – 0.7      | 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) mold shrinkage measured on 60x60x2mm plaques

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(4) 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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