

# LNPT<sup>™</sup> LUBRICOMP<sup>™</sup> COMPOUND SCP36

SCL-4536

## DESCRIPTION

LNP LUBRICOMP SCP36 compound is based on Nylon 12 resin containing 30% carbon fiber, 15% PTFE/silicone. Added features of this grade include: Wear Resistant, Electrically Conductive.

| GENERAL INFORMATION        |   |
|----------------------------|---|
| Features                   | Electrically Conductive, Wear resistant, Carbon fiber filled, High stiffness/Strength |
| Fillers                    | Carbon Fiber, PTFE/Silicone   |
| Polymer Types              | Polyamide 12 (Nylon 12)   |
| Processing Techniques      | Injection Molding   |
| INDUSTRY                   | SUB INDUSTRY  |
| Automotive                 | Automotive Under the Hood   |
| Consumer                   | Home Appliances, Commercial Appliance   |
| Electrical and Electronics | Electronic Components, Mobile Phone - Computer - Tablets                              |

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES                                   | TYPICAL VALUES | UNITS             | TEST METHODS |
|--|----------------|-------------------|--------------|
| <b>MECHANICAL <sup>(1)</sup></b>             |                |                   |              |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 178            | MPa               | ASTM D790    |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 16200          | MPa               | ASTM D790    |
| Tensile Stress, break, 5 mm/min              | 122            | MPa               | ISO 527      |
| Tensile Strain, break, 5 mm/min              | 1              | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                    | 18160          | MPa               | ISO 527      |
| Flexural Modulus, 2 mm/min                   | 16030          | MPa               | ISO 178      |
| <b>IMPACT <sup>(1)</sup></b>                 |                |                   |              |
| Izod Impact, unnotched, 23°C                 | 508            | J/m               | ASTM D4812   |
| Izod Impact, notched, 23°C                   | 82             | J/m               | ASTM D256    |
| Multiaxial Impact                            | 2              | J                 | ISO 6603     |
| Instrumented Dart Impact Total Energy, 23°C  | 10             | J                 | ASTM D3763   |
| Izod Impact, unnotched 80*10*4 +23°C         | 34             | kJ/m <sup>2</sup> | ISO 180/1U   |
| Izod Impact, notched 80*10*4 +23°C           | 7              | kJ/m <sup>2</sup> | ISO 180/1A   |
| <b>THERMAL <sup>(1)</sup></b>                |                |                   |              |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 178            | °C                | ASTM D648    |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 173            | °C                | ASTM D648    |
| CTE, -30°C to 30°C, flow                     | 3.2E-05        | 1/°C              | ASTM D696    |
| CTE, -30°C to 30°C, xflow                    | 4.1E-05        | 1/°C              | ASTM D696    |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm       | 177            | °C                | ISO 75/Bf    |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 169            | °C                | ISO 75/Af    |
| Relative Temp Index, Elec <sup>(2)</sup>     | 65             | °C                | UL 746B      |

| PROPERTIES  | TYPICAL VALUES                    | UNITS  | TEST METHODS                |
|---|-----------------------------------|--|-----------------------------|
| Relative Temp Index, Mech w/impact <sup>(2)</sup>   | 65                                | °C   | UL 746B                     |
| Relative Temp Index, Mech w/o impact <sup>(2)</sup> | 65                                | °C   | UL 746B                     |
| <b>PHYSICAL <sup>(1)</sup></b>                      |                                   |  |                             |
| Density   | 1.26                              | g/cm <sup>3</sup>                                  | ASTM D792                   |
| Moisture Absorption, (23°C/50% RH/24 hrs)           | 0.16                              | %  | ASTM D570                   |
| Mold Shrinkage, flow, 24 hrs <sup>(3)</sup>         | 0.1                               | %  | ASTM D955                   |
| Mold Shrinkage, xflow, 24 hrs <sup>(3)</sup>        | 0.5                               | %  | ASTM D955                   |
| Wear Factor Washer                                  | 14                                | 10 <sup>-4</sup> -10 in <sup>4</sup> -min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Wear Factor Ring                                    | 0                                 | 10 <sup>-4</sup> -10 in <sup>4</sup> -min/ft-lb-hr | ASTM D3702 Modified: Manual |
| Dynamic COF   | 0.47                              | -  | ASTM D3702 Modified: Manual |
| Static COF  | 0.33                              | -  | ASTM D3702 Modified: Manual |
| Moisture Absorption (23°C / 50% RH)                 | 0.24                              | %  | ISO 62                      |
| <b>FLAME CHARACTERISTICS <sup>(2)</sup></b>         |                                   |  |                             |
| UL Yellow Card Link                                 | <a href="#">E207780-101282600</a> | -  | -                           |
| UL Recognized, 94HB Flame Class Rating              | 1.5                               | mm   | UL 94                       |
| <b>INJECTION MOLDING <sup>(4)</sup></b>             |                                   |  |                             |
| Drying Temperature                                  | 100 – 105                         | °C   |                             |
| Drying Time   | 3 – 4                             | Hrs  |                             |
| Maximum Moisture Content                            | 0.02                              | %  |                             |
| Melt Temperature                                    | 260 – 280                         | °C   |                             |
| Nozzle Temperature                                  | 250 – 270                         | °C   |                             |
| Front - Zone 3 Temperature                          | 260 – 280                         | °C   |                             |
| Middle - Zone 2 Temperature                         | 250 – 270                         | °C   |                             |
| Rear - Zone 1 Temperature                           | 240 – 260                         | °C   |                             |
| Hopper Temperature                                  | 40 – 60                           | °C   |                             |
| Mold Temperature                                    | 60 – 85                           | °C   |                             |

(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) 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.

## DISCLAIMER

Any sale by SABIC, its subsidiaries and affiliates (each a "seller"), is made exclusively under seller's standard conditions of sale (available upon request) unless agreed otherwise in writing and signed on behalf of the seller. While the information contained herein is given in good faith, SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND NONINFRINGEMENT OF INTELLECTUAL PROPERTY, NOR ASSUMES ANY LIABILITY, DIRECT OR INDIRECT, WITH RESPECT TO THE PERFORMANCE, SUITABILITY OR FITNESS FOR INTENDED USE OR PURPOSE OF THESE PRODUCTS IN ANY APPLICATION. Each customer must determine the suitability of seller materials for the customer's particular use through appropriate testing and analysis. No statement by seller concerning a possible use of any product, service or design is intended, or should be construed, to grant any license under any patent or other intellectual property right.