

# LNP™ LUBRICOMP™ GFL36L compound

Polysulfone

SABIC Innovative Plastics

## Message:

LNP\* LUBRICOMP\* GFL36L is a compound based on Polysulfone resin containing 30% Glass Fiber, 15% PTFE. Added features of this material include: Low Extractable, Wear Resistant.

Also known as: LNP\* LUBRICOMP\* Compound GFL-4036 LE

Product reorder name: GFL36L

| General Information              |                                  |                   |                      |
|----------------------------------|----------------------------------|-------------------|----------------------|
| Filler / Reinforcement           | Glass Fiber,30% Filler by Weight |                   |                      |
| Additive                         | PTFE Lubricant (15%)             |                   |                      |
| Features                         | Good Wear Resistance             |                   |                      |
|                                  | Low Extractables                 |                   |                      |
|                                  | Lubricated                       |                   |                      |
| Processing Method                | Injection Molding                |                   |                      |
| Physical                         | Nominal Value                    | Unit              | Test Method          |
| Specific Gravity                 | 1.62                             | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Molding Shrinkage                |                                  |                   |                      |
| Flow : 24 hr                     | 0.20 to 0.40                     | %                 | ASTM D955            |
| Across Flow : 24 hr              | 0.40 to 0.60                     | %                 | ASTM D955            |
| Across Flow : 24 hr              | 0.51                             | %                 | ISO 294-4            |
| Flow : 24 hr                     | 0.26                             | %                 | ISO 294-4            |
| Water Absorption (24 hr, 50% RH) | 0.10                             | %                 | ASTM D570            |
| Mechanical                       | Nominal Value                    | Unit              | Test Method          |
| Tensile Modulus                  |                                  |                   |                      |
| -- <sup>1</sup>                  | 10300                            | MPa               | ASTM D638            |
| --                               | 9330                             | MPa               | ISO 527-2/1          |
| Tensile Strength                 |                                  |                   |                      |
| Yield                            | 88.9                             | MPa               | ASTM D638            |
| Yield                            | 87.0                             | MPa               | ISO 527-2            |
| Break                            | 88.9                             | MPa               | ASTM D638            |
| Break                            | 87.0                             | MPa               | ISO 527-2            |
| Tensile Elongation               |                                  |                   | ASTM D638, ISO 527-2 |
| Yield                            | 1.3                              | %                 |                      |
| Break                            | 1.3                              | %                 |                      |
| Flexural Modulus                 |                                  |                   |                      |
| --                               | 8960                             | MPa               | ASTM D790            |
| --                               | 9000                             | MPa               | ISO 178              |
| Flexural Strength                |                                  |                   |                      |

|                                                 |                |                                                 |                     |
|-------------------------------------------------|----------------|-------------------------------------------------|---------------------|
| --                                              | 110            | MPa                                             | ASTM D790           |
| --                                              | 121            | MPa                                             | ISO 178             |
| Coefficient of Friction                         |                |                                                 | ASTM D3702 Modified |
| vs. Itself - Dynamic                            | 0.42           |                                                 |                     |
| vs. Itself - Static                             | 0.62           |                                                 |                     |
| Wear Factor - Washer                            | 44.5           | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr | ASTM D3702 Modified |
| Impact                                          | Nominal Value  | Unit                                            | Test Method         |
| Notched Izod Impact                             |                |                                                 |                     |
| 23°C                                            | 75             | J/m                                             | ASTM D256           |
| 23°C <sup>2</sup>                               | 8.1            | kJ/m <sup>2</sup>                               | ISO 180/1A          |
| Unnotched Izod Impact                           |                |                                                 |                     |
| 23°C                                            | 340            | J/m                                             | ASTM D4812          |
| 23°C <sup>3</sup>                               | 24             | kJ/m <sup>2</sup>                               | ISO 180/1U          |
| Instrumented Dart Impact                        |                |                                                 |                     |
| 23°C, Energy at Peak Load                       | 14.4           | J                                               | ASTM D3763          |
| --                                              | 3.70           | J                                               | ISO 6603-2          |
| Thermal                                         | Nominal Value  | Unit                                            | Test Method         |
| Deflection Temperature Under Load               |                |                                                 |                     |
| 0.45 MPa, Unannealed, 3.20 mm                   | 185            | °C                                              | ASTM D648           |
| 0.45 MPa, Unannealed, 64.0 mm Span <sup>4</sup> | 186            | °C                                              | ISO 75-2/Bf         |
| 1.8 MPa, Unannealed, 3.20 mm                    | 180            | °C                                              | ASTM D648           |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>5</sup>  | 181            | °C                                              | ISO 75-2/Af         |
| CLTE                                            |                |                                                 |                     |
| Flow : -40 to 40°C                              | 3.1E-5         | cm/cm/°C                                        | ASTM E831           |
| Flow : -40 to 40°C                              | 3.0E-5         | cm/cm/°C                                        | ISO 11359-2         |
| Transverse : -40 to 40°C                        | 2.5E-5         | cm/cm/°C                                        | ASTM E831           |
| Transverse : -40 to 40°C                        | 2.4E-5         | cm/cm/°C                                        | ISO 11359-2         |
| Injection                                       | Nominal Value  | Unit                                            |                     |
| Drying Temperature                              | 121 to 149     | °C                                              |                     |
| Drying Time                                     | 4.0            | hr                                              |                     |
| Suggested Max Moisture                          | 0.050          | %                                               |                     |
| Rear Temperature                                | 327 to 338     | °C                                              |                     |
| Middle Temperature                              | 338 to 349     | °C                                              |                     |
| Front Temperature                               | 349 to 360     | °C                                              |                     |
| Processing (Melt) Temp                          | 360 to 371     | °C                                              |                     |
| Mold Temperature                                | 149            | °C                                              |                     |
| Back Pressure                                   | 0.172 to 0.344 | MPa                                             |                     |
| Screw Speed                                     | 30 to 60       | rpm                                             |                     |
| NOTE                                            |                |                                                 |                     |
| 1.                                              | 50 mm/min      |                                                 |                     |
| 2.                                              | 80*10*4        |                                                 |                     |
| 3.                                              | 80*10*4        |                                                 |                     |

|    |            |
|----|------------|
| 4. | 80*10*4 mm |
| 5. | 80*10*4 mm |

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