

# LNP™ LUBRICOMP™ RFN16SXZ compound

Polyamide 66  
SABIC Innovative Plastics

Message:

LNP LUBRICOMP\* RFN16SXZ is a compound based on Nylon 66 resin containing 30% Glass Fiber, 5% MOS2. Added features of this material include: Heat Stabilized, Wear Resistant.

Also known as: LNP\* LUBRICOMP\* Compound RFL-4216 HS

Product reorder name: RFN16SXZ

| General Information       |                                     |                   |                      |
|---------------------------|-------------------------------------|-------------------|----------------------|
| Filler / Reinforcement    | Glass Fiber,30% Filler by Weight    |                   |                      |
| Additive                  | Heat Stabilizer                     |                   |                      |
|                           | Molybdenum Disulfide Lubricant (5%) |                   |                      |
| Features                  | Good Wear Resistance                |                   |                      |
|                           | Heat Stabilized                     |                   |                      |
|                           | Lubricated                          |                   |                      |
| Processing Method         | Injection Molding                   |                   |                      |
| Physical                  | Nominal Value                       | Unit              | Test Method          |
| Specific Gravity          | 1.41                                | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Molding Shrinkage         |                                     |                   |                      |
| Flow : 24 hr              | 0.30                                | %                 | ASTM D955            |
| Across Flow : 24 hr       | 1.3                                 | %                 | ASTM D955, ISO 294-4 |
| Flow : 24 hr              | 0.28                                | %                 | ISO 294-4            |
| Water Absorption          |                                     |                   |                      |
| 24 hr, 50% RH             | 0.65                                | %                 | ASTM D570            |
| Equilibrium, 23°C, 50% RH | 1.1                                 | %                 | ISO 62               |
| Mechanical                | Nominal Value                       | Unit              | Test Method          |
| Tensile Modulus           |                                     |                   |                      |
| -- <sup>1</sup>           | 10700                               | MPa               | ASTM D638            |
| --                        | 9900                                | MPa               | ISO 527-2/1          |
| Tensile Strength          |                                     |                   |                      |
| Break                     | 161                                 | MPa               | ASTM D638            |
| Break                     | 163                                 | MPa               | ISO 527-2            |
| Tensile Elongation        |                                     |                   |                      |
| Break                     | 2.8                                 | %                 | ASTM D638            |
| Break                     | 3.0                                 | %                 | ISO 527-2            |
| Flexural Modulus          |                                     |                   |                      |
| --                        | 8410                                | MPa               | ASTM D790            |
| --                        | 9800                                | MPa               | ISO 178              |

|                                                |                |                                                 |                        |
|------------------------------------------------|----------------|-------------------------------------------------|------------------------|
| Flexural Strength                              |                |                                                 |                        |
| --                                             | 247            | MPa                                             | ASTM D790              |
| --                                             | 255            | MPa                                             | ISO 178                |
| Coefficient of Friction                        |                |                                                 | ASTM D3702 Modified    |
| vs. Itself - Dynamic                           | 0.43           |                                                 |                        |
| vs. Itself - Static                            | 0.49           |                                                 |                        |
| Wear Factor - Washer                           | 159            | 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                                           | 80             | J/m                                             | ASTM D256              |
| 23°C <sup>2</sup>                              | 8.0            | kJ/m <sup>2</sup>                               | ISO 180/1A             |
| Unnotched Izod Impact                          |                |                                                 |                        |
| 23°C                                           | 870            | J/m                                             | ASTM D4812             |
| 23°C <sup>3</sup>                              | 58             | kJ/m <sup>2</sup>                               | ISO 180/1U             |
| Instrumented Dart Impact                       |                |                                                 |                        |
| 23°C, Energy at Peak Load                      | 9.20           | J                                               | ASTM D3763             |
| --                                             | 2.30           | J                                               | ISO 6603-2             |
| Thermal                                        | Nominal Value  | Unit                                            | Test Method            |
| Deflection Temperature Under Load              |                |                                                 |                        |
| 0.45 MPa, Unannealed, 3.20 mm                  | 261            | °C                                              | ASTM D648              |
| 1.8 MPa, Unannealed, 3.20 mm                   | 249            | °C                                              | ASTM D648              |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>4</sup> | 220            | °C                                              | ISO 75-2/Af            |
| CLTE                                           |                |                                                 |                        |
| Flow : -40 to 40°C                             | 3.1E-5         | cm/cm/°C                                        | ASTM E831              |
| Flow : -40 to 40°C                             | 3.2E-5         | cm/cm/°C                                        | ISO 11359-2            |
| Transverse : -40 to 40°C                       | 6.3E-5         | cm/cm/°C                                        | ASTM E831, ISO 11359-2 |
| Injection                                      | Nominal Value  | Unit                                            |                        |
| Drying Temperature                             | 82.2           | °C                                              |                        |
| Drying Time                                    | 4.0            | hr                                              |                        |
| Suggested Max Moisture                         | 0.15 to 0.25   | %                                               |                        |
| Rear Temperature                               | 266 to 277     | °C                                              |                        |
| Middle Temperature                             | 282 to 293     | °C                                              |                        |
| Front Temperature                              | 293 to 304     | °C                                              |                        |
| Processing (Melt) Temp                         | 282 to 304     | °C                                              |                        |
| Mold Temperature                               | 93.3 to 110    | °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     |                                                 |                        |

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