

# LNP™ LUBRICOMP™ RFN18S compound

Polyamide 66  
SABIC Innovative Plastics

Message:

LNP LUBRICOMP\* RFN18S is a compound based on Nylon 66 resin containing Glass Fiber, MOS2. Added features of this material include: Heat Stabilized, Wear Resistant.

Also known as: LNP\* LUBRICOMP\* Compound RFL-4218 HS

Product reorder name: RFN18S

| General Information       |                                                          |                   |                     |
|---------------------------|----------------------------------------------------------|-------------------|---------------------|
| Filler / Reinforcement    | Glass fiber reinforced material                          |                   |                     |
| Additive                  | Molybdenum disulfide lubricant<br>heat stabilizer        |                   |                     |
| Features                  | Good wear resistance<br>Thermal Stability<br>Lubrication |                   |                     |
| Processing Method         | Injection molding                                        |                   |                     |
| Physical                  | Nominal Value                                            | Unit              | Test Method         |
| Density                   | 1.51                                                     | g/cm <sup>3</sup> | ISO 1183, ASTM D792 |
| Molding Shrinkage         |                                                          |                   |                     |
| Flow: 24 hours            | 0.30                                                     | %                 | ASTM D955           |
| Transverse flow: 24 hours | 1.1                                                      | %                 | ASTM D955           |
| Lateral flow: 24 hours    | 1.2                                                      | %                 | ISO 294-4           |
| Traffic: 24 hours         | 0.35                                                     | %                 | ISO 294-4           |
| Water Absorption          |                                                          |                   |                     |
| 24 hr, 50% RH             | 0.62                                                     | %                 | ASTM D570           |
| Equilibrium, 23°C, 50% RH | 1.0                                                      | %                 | ISO 62              |
| Mechanical                | Nominal Value                                            | Unit              | Test Method         |
| Tensile Modulus           |                                                          |                   |                     |
| -- <sup>1</sup>           | 15500                                                    | MPa               | ASTM D638           |
| --                        | 14000                                                    | MPa               | ISO 527-2/1         |
| Tensile Strength          |                                                          |                   |                     |
| Fracture                  | 178                                                      | MPa               | ASTM D638           |
| Fracture                  | 192                                                      | MPa               | ISO 527-2           |
| Tensile Elongation        |                                                          |                   |                     |
| Fracture                  | 1.8                                                      | %                 | ASTM D638           |
| Fracture                  | 2.2                                                      | %                 | ISO 527-2           |
| Flexural Modulus          |                                                          |                   |                     |
| --                        | 10800                                                    | MPa               | ASTM D790           |

|                                               |               |                                                 |                     |
|-----------------------------------------------|---------------|-------------------------------------------------|---------------------|
| --                                            | 13100         | MPa                                             | ISO 178             |
| Flexural Strength                             |               |                                                 |                     |
| --                                            | 268           | MPa                                             | ASTM D790           |
| --                                            | 288           | MPa                                             | ISO 178             |
| Coefficient of Friction                       |               |                                                 |                     |
| Dynamic                                       | 0.75          |                                                 | ASTM D3702 Modified |
| Static                                        | 0.59          |                                                 | ASTM D3702 Modified |
| Wear Factor - Washer                          | 45.0          | 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                                          | 85            | J/m                                             | ASTM D256           |
| 23°C <sup>2</sup>                             | 11            | kJ/m <sup>2</sup>                               | ISO 180/1A          |
| Unnotched Izod Impact                         |               |                                                 |                     |
| 23°C                                          | 890           | J/m                                             | ASTM D4812          |
| 23°C <sup>3</sup>                             | 59            | kJ/m <sup>2</sup>                               | ISO 180/1U          |
| Instrumented Dart Impact                      |               |                                                 |                     |
| 23°C, Energy at Peak Load                     | 8.70          | J                                               | ASTM D3763          |
| --                                            | 2.50          | J                                               | ISO 6603-2          |
| Thermal                                       | Nominal Value | Unit                                            | Test Method         |
| Deflection Temperature Under Load             |               |                                                 |                     |
| 0.45 MPa, unannealed, 3.20mm                  | 259           | °C                                              | ASTM D648           |
| 1.8 MPa, unannealed, 3.20mm                   | 251           | °C                                              | ASTM D648           |
| 1.8 MPa, unannealed, 64.0mm span <sup>4</sup> | > 240         | °C                                              | ISO 75-2/Af         |
| Injection                                     | Nominal Value | Unit                                            |                     |
| Drying Temperature                            | 82            | °C                                              |                     |
| Drying Time                                   | 4.0           | hr                                              |                     |
| Suggested Max Moisture                        | 0.15 - 0.25   | %                                               |                     |
| Rear Temperature                              | 266 - 277     | °C                                              |                     |
| Middle Temperature                            | 282 - 293     | °C                                              |                     |
| Front Temperature                             | 293 - 304     | °C                                              |                     |
| Processing (Melt) Temp                        | 282 - 304     | °C                                              |                     |
| Mold Temperature                              | 93 - 110      | °C                                              |                     |
| Back Pressure                                 | 0.172 - 0.344 | MPa                                             |                     |
| Screw Speed                                   | 30 - 60       | rpm                                             |                     |
| NOTE                                          |               |                                                 |                     |
| 1.                                            | 50 mm/min     |                                                 |                     |
| 2.                                            | 80*10*4       |                                                 |                     |
| 3.                                            | 80*10*4       |                                                 |                     |
| 4.                                            | 80*10*4 mm    |                                                 |                     |

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