

# LNP™ THERMOCOMP™ RF002 compound

Polyamide 66

SABIC Innovative Plastics

## Message:

LNP THERMOCOMP\* RF002 is a compound based on Nylon 66 resin containing 10% Glass Fiber.

Also known as: LNP\* THERMOCOMP\* Compound RF-1002

Product reorder name: RF002

| General Information       |                                  |                   |                      |
|---------------------------|----------------------------------|-------------------|----------------------|
| Filler / Reinforcement    | Glass Fiber,10% Filler by Weight |                   |                      |
| Processing Method         | Injection Molding                |                   |                      |
| Physical                  | Nominal Value                    | Unit              | Test Method          |
| Specific Gravity          |                                  |                   |                      |
| --                        | 1.22                             | g/cm <sup>3</sup> | ASTM D792            |
| --                        | 1.21                             | g/cm <sup>3</sup> | ISO 1183             |
| Molding Shrinkage         |                                  |                   |                      |
| Flow : 24 hr              | 0.80                             | %                 | ASTM D955            |
| Across Flow : 24 hr       | 1.2                              | %                 | ASTM D955, ISO 294-4 |
| Flow : 24 hr              | 0.76                             | %                 | ISO 294-4            |
| Water Absorption          |                                  |                   |                      |
| 24 hr, 50% RH             | 0.80                             | %                 | ASTM D570            |
| Equilibrium, 23°C, 50% RH | 1.7                              | %                 | ISO 62               |
| Mechanical                | Nominal Value                    | Unit              | Test Method          |
| Tensile Modulus           |                                  |                   |                      |
| -- <sup>1</sup>           | 5970                             | MPa               | ASTM D638            |
| --                        | 5240                             | MPa               | ISO 527-2/1          |
| Tensile Strength          |                                  |                   |                      |
| Break                     | 112                              | MPa               | ASTM D638            |
| Break                     | 90.0                             | MPa               | ISO 527-2            |
| Tensile Elongation        |                                  |                   |                      |
| Break                     | 2.6                              | %                 | ASTM D638            |
| Break                     | 2.0                              | %                 | ISO 527-2            |
| Flexural Modulus          |                                  |                   |                      |
| --                        | 5380                             | MPa               | ASTM D790            |
| --                        | 4580                             | MPa               | ISO 178              |
| Flexural Strength         |                                  |                   |                      |
| --                        | 189                              | MPa               | ASTM D790            |
| --                        | 139                              | MPa               | ISO 178              |
| Impact                    | Nominal Value                    | Unit              | Test Method          |
| Notched Izod Impact       |                                  |                   |                      |
| 23°C                      | 43                               | J/m               | ASTM D256            |

|                                                |                |                   |                        |
|------------------------------------------------|----------------|-------------------|------------------------|
| 23°C <sup>2</sup>                              | 5.1            | kJ/m <sup>2</sup> | ISO 180/1A             |
| Unnotched Izod Impact                          |                |                   |                        |
| 23°C                                           | 500            | J/m               | ASTM D4812             |
| 23°C <sup>3</sup>                              | 36             | kJ/m <sup>2</sup> | ISO 180/1U             |
| Instrumented Dart Impact                       |                |                   |                        |
| 23°C, Energy at Peak Load                      | 5.97           | J                 | ASTM D3763             |
| --                                             | 1.00           | J                 | ISO 6603-2             |
| Thermal                                        | Nominal Value  | Unit              | Test Method            |
| Deflection Temperature Under Load              |                |                   |                        |
| 0.45 MPa, Unannealed, 3.20 mm                  | 265            | °C                | ASTM D648              |
| 1.8 MPa, Unannealed, 3.20 mm                   | 250            | °C                | ASTM D648              |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>4</sup> | 235            | °C                | ISO 75-2/Af            |
| CLTE                                           |                |                   |                        |
| Flow : -40 to 40°C                             | 4.9E-5         | cm/cm/°C          | ASTM E831, ISO 11359-2 |
| Transverse : -40 to 40°C                       | 7.9E-5         | cm/cm/°C          | ASTM E831              |
| Transverse : -40 to 40°C                       | 8.1E-5         | cm/cm/°C          | 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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