

# LNP™ THERMOCOMP™ RF002ES compound

Polyamide 66  
SABIC Innovative Plastics

Message:

LNP THERMOCOMP\* RF002ES is a compound based on Nylon 66 resin containing 10% Glass Fiber. Added features of this material include: Easy Molding, Heat Stabilized.

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

Product reorder name: RF002ES

| General Information       |                                  |       |                     |
|---------------------------|----------------------------------|-------|---------------------|
| UL YellowCard             | E121562-101281596                |       |                     |
| Filler / Reinforcement    | Glass Fiber,10% Filler by Weight |       |                     |
| Additive                  | Heat Stabilizer                  |       |                     |
| Features                  | Good Moldability                 |       |                     |
|                           | Heat Stabilized                  |       |                     |
| Processing Method         | Injection Molding                |       |                     |
| Physical                  | Nominal Value                    | Unit  | Test Method         |
| Specific Gravity          | 1.22                             | g/cm³ | ASTM D792, ISO 1183 |
| Molding Shrinkage         |                                  |       |                     |
| Flow : 24 hr              | 0.80                             | %     | ASTM D955           |
| Across Flow : 24 hr       | 0.90                             | %     | ASTM D955           |
| Across Flow : 24 hr       | 0.89                             | %     | ISO 294-4           |
| Flow : 24 hr              | 0.77                             | %     | ISO 294-4           |
| Water Absorption          |                                  |       |                     |
| 24 hr, 50% RH             | 1.3                              | %     | ASTM D570           |
| Equilibrium, 23°C, 50% RH | 1.9                              | %     | ISO 62              |
| Mechanical                | Nominal Value                    | Unit  | Test Method         |
| Tensile Modulus           |                                  |       |                     |
| -- <sup>1</sup>           | 4850                             | MPa   | ASTM D638           |
| --                        | 5130                             | MPa   | ISO 527-2/1         |
| Tensile Strength          |                                  |       |                     |
| Break                     | 87.8                             | MPa   | ASTM D638           |
| Break                     | 90.0                             | MPa   | ISO 527-2           |
| Tensile Strain            |                                  |       |                     |
| Yield                     | 2.3                              | %     | ISO 527-2           |
| Break                     | 2.5                              | %     | ASTM D638           |
| Break                     | 2.3                              | %     | ISO 527-2           |
| Flexural Modulus          |                                  |       |                     |
| --                        | 4610                             | MPa   | ASTM D790           |
| --                        | 4280                             | MPa   | ISO 178             |

|                                                |                |                   |             |
|------------------------------------------------|----------------|-------------------|-------------|
| Flexural Strength                              |                |                   |             |
| --                                             | 156            | MPa               | ASTM D790   |
| --                                             | 131            | MPa               | ISO 178     |
| Impact                                         | Nominal Value  | Unit              | Test Method |
| Notched Izod Impact                            |                |                   |             |
| 23°C                                           | 32             | J/m               | ASTM D256   |
| 23°C <sup>2</sup>                              | 3.4            | kJ/m <sup>2</sup> | ISO 180/1A  |
| Unnotched Izod Impact                          |                |                   |             |
| 23°C                                           | 300            | J/m               | ASTM D4812  |
| 23°C <sup>3</sup>                              | 21             | kJ/m <sup>2</sup> | ISO 180/1U  |
| Instrumented Dart Impact                       |                |                   |             |
| 23°C, Energy at Peak Load                      | 4.65           | J                 | ASTM D3763  |
| --                                             | 1.32           | J                 | ISO 6603-2  |
| Thermal                                        | Nominal Value  | Unit              | Test Method |
| Deflection Temperature Under Load              |                |                   |             |
| 1.8 MPa, Unannealed, 3.20 mm                   | 173            | °C                | ASTM D648   |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>4</sup> | 175            | °C                | ISO 75-2/Af |
| 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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