

# LNP™ THERMOCOMP™ RF006 compound

Polyamide 66

SABIC Innovative Plastics

## Message:

LNP THERMOCOMP RF006 is a compound based on Nylon 66 resin containing 30% Glass Fiber.

Also known as: LNP\* THERMOCOMP\* Compound RF-1006

Product reorder name: RF006

| General Information              |                                  |                   |             |
|----------------------------------|----------------------------------|-------------------|-------------|
| UL YellowCard                    | E121562-101282588                |                   |             |
| Filler / Reinforcement           | Glass Fiber,30% Filler by Weight |                   |             |
| Processing Method                | Injection Molding                |                   |             |
| Physical                         | Nominal Value                    | Unit              | Test Method |
| Specific Gravity                 |                                  |                   | ASTM D792   |
| --                               | 1.41                             | g/cm <sup>3</sup> |             |
| --                               | 1.40                             | g/cm <sup>3</sup> |             |
| Molding Shrinkage                |                                  |                   | ASTM D955   |
| Flow : 24 hr                     | 0.30 to 0.60                     | %                 |             |
| Across Flow : 24 hr              | 0.90 to 2.0                      | %                 |             |
| Water Absorption                 |                                  |                   |             |
| 24 hr, 50% RH                    | 0.64                             | %                 | ASTM D570   |
| Equilibrium, 23°C, 50% RH        | 0.94                             | %                 | ISO 62      |
| Mechanical                       | Nominal Value                    | Unit              | Test Method |
| Tensile Modulus                  |                                  |                   |             |
| -- <sup>1</sup>                  | 11400                            | MPa               | ASTM D638   |
| --                               | 10600                            | MPa               | ISO 527-2/1 |
| Tensile Strength                 |                                  |                   |             |
| Break <sup>2</sup>               | 167                              | MPa               | ASTM D638   |
| Break                            | 160                              | MPa               | ISO 527-2/5 |
| Tensile Elongation               |                                  |                   |             |
| Break <sup>3</sup>               | 2.4                              | %                 | ASTM D638   |
| Break                            | 2.4                              | %                 | ISO 527-2/5 |
| Flexural Modulus                 |                                  |                   |             |
| 50.0 mm Span <sup>4</sup>        | 9700                             | MPa               | ASTM D790   |
| -- <sup>5</sup>                  | 9400                             | MPa               | ISO 178     |
| Flexural Stress                  |                                  |                   |             |
| --                               | 233                              | MPa               | ISO 178     |
| Yield, 50.0 mm Span <sup>6</sup> | 243                              | MPa               | ASTM D790   |
| Break, 50.0 mm Span <sup>7</sup> | 242                              | MPa               | ASTM D790   |
| Impact                           | Nominal Value                    | Unit              | Test Method |
| Notched Izod Impact              |                                  |                   |             |

| 23°C                                               | 67                 | J/m               | ASTM D256   |
|----------------------------------------------------|--------------------|-------------------|-------------|
| 23°C <sup>8</sup>                                  | 6.5                | kJ/m <sup>2</sup> | ISO 180/1A  |
| Unnotched Izod Impact Strength <sup>9</sup> (23°C) | 44                 | kJ/m <sup>2</sup> | ISO 180/1U  |
| Instrumented Dart Impact                           |                    |                   |             |
| 23°C, Total Energy                                 | 6.50               | J                 | ASTM D3763  |
| --                                                 | 2.40               | J                 | ISO 6603-2  |
| Thermal                                            | Nominal Value      | Unit              | Test Method |
| Heat Deflection Temperature                        |                    |                   |             |
| 0.45 MPa, Unannealed, 64.0 mm Span <sup>10</sup>   | 255                | °C                | ISO 75-2/Bf |
| 1.8 MPa, Unannealed, 3.20 mm                       | 246                | °C                | ASTM D648   |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>11</sup>    | 236                | °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.                                                 | Type I, 5.0 mm/min |                   |             |
| 3.                                                 | Type I, 5.0 mm/min |                   |             |
| 4.                                                 | 1.3 mm/min         |                   |             |
| 5.                                                 | 2.0 mm/min         |                   |             |
| 6.                                                 | 1.3 mm/min         |                   |             |
| 7.                                                 | 1.3 mm/min         |                   |             |
| 8.                                                 | 80*10*4            |                   |             |
| 9.                                                 | 80*10*4            |                   |             |
| 10.                                                | 80*10*4 mm         |                   |             |
| 11.                                                | 80*10*4 mm         |                   |             |

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