

# LNP™ THERMOCOMP™ RF003ES compound

Polyamide 66

SABIC Innovative Plastics

## Message:

LNP THERMOCOMP RF003ES is a Nylon 66 base resin containing 15% Glass Fiber. Added features of this material include: Easy Molding, Heat Stabilized.

Also known as: LNP\* THERMOCOMP\* Compound RF-1003 EM HS

Product reorder name: RF003ES

| General Information       |                                  |                   |             |
|---------------------------|----------------------------------|-------------------|-------------|
| UL YellowCard             | E121562-101281596                |                   |             |
| Filler / Reinforcement    | Glass Fiber,15% Filler by Weight |                   |             |
| Additive                  | Heat Stabilizer                  |                   |             |
| Features                  | Good Moldability                 |                   |             |
|                           | Heat Stabilized                  |                   |             |
|                           |                                  |                   |             |
| Processing Method         | Injection Molding                |                   |             |
| Physical                  | Nominal Value                    | Unit              | Test Method |
| Specific Gravity          |                                  |                   |             |
| --                        | 1.26                             | g/cm <sup>3</sup> | ASTM D792   |
| --                        | 1.25                             | g/cm <sup>3</sup> | ISO 1183    |
| Molding Shrinkage         |                                  |                   | ASTM D955   |
| Flow : 24 hr              | 0.70 to 1.0                      | %                 |             |
| Across Flow : 24 hr       | 1.0 to 3.0                       | %                 |             |
| Water Absorption          |                                  |                   |             |
| 24 hr, 50% RH             | 1.1                              | %                 | ASTM D570   |
| Equilibrium, 23°C, 50% RH | 1.6                              | %                 | ISO 62      |
| Mechanical                | Nominal Value                    | Unit              | Test Method |
| Tensile Modulus           |                                  |                   |             |
| -- <sup>1</sup>           | 5940                             | MPa               | ASTM D638   |
| --                        | 5970                             | MPa               | ISO 527-2/1 |
| Tensile Strength          |                                  |                   |             |
| Yield <sup>2</sup>        | 114                              | MPa               | ASTM D638   |
| Yield                     | 115                              | MPa               | ISO 527-2/5 |
| Break <sup>3</sup>        | 114                              | MPa               | ASTM D638   |
| Break                     | 115                              | MPa               | ISO 527-2/5 |
| Tensile Elongation        |                                  |                   |             |
| Yield <sup>4</sup>        | 2.8                              | %                 | ASTM D638   |
| Yield                     | 3.2                              | %                 | ISO 527-2/5 |
| Break <sup>5</sup>        | 2.8                              | %                 | ASTM D638   |
| Break                     | 3.2                              | %                 | ISO 527-2/5 |
| Flexural Modulus          |                                  |                   |             |

|                                                  |                    |                   |             |
|--------------------------------------------------|--------------------|-------------------|-------------|
| 50.0 mm Span <sup>6</sup>                        | 4740               | MPa               | ASTM D790   |
| -- <sup>7</sup>                                  | 4140               | MPa               | ISO 178     |
| Flexural Stress                                  |                    |                   |             |
| --                                               | 128                | MPa               | ISO 178     |
| Yield, 50.0 mm Span <sup>8</sup>                 | 174                | MPa               | ASTM D790   |
| Break, 50.0 mm Span <sup>9</sup>                 | 174                | MPa               | ASTM D790   |
| Impact                                           | Nominal Value      | Unit              | Test Method |
| Notched Izod Impact                              |                    |                   |             |
| 23°C                                             | 33                 | J/m               | ASTM D256   |
| 23°C <sup>10</sup>                               | 3.3                | kJ/m <sup>2</sup> | ISO 180/1A  |
| Unnotched Izod Impact                            |                    |                   |             |
| 23°C                                             | 490                | J/m               | ASTM D4812  |
| 23°C <sup>11</sup>                               | 30                 | kJ/m <sup>2</sup> | ISO 180/1U  |
| Instrumented Dart Impact                         |                    |                   |             |
| 23°C, Total Energy                               | 2.40               | J                 | ASTM D3763  |
| --                                               | 1.90               | J                 | ISO 6603-2  |
| Thermal                                          | Nominal Value      | Unit              | Test Method |
| Deflection Temperature Under Load                |                    |                   |             |
| 0.45 MPa, Unannealed, 3.20 mm                    | 247                | °C                | ASTM D648   |
| 0.45 MPa, Unannealed, 64.0 mm Span <sup>12</sup> | 240                | °C                | ISO 75-2/Bf |
| 1.8 MPa, Unannealed, 3.20 mm                     | 221                | °C                | ASTM D648   |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>13</sup>  | 203                | °C                | ISO 75-2/Af |
| CLTE                                             |                    |                   | ASTM D696   |
| Flow : -30 to 30°C                               | 4.2E-5             | cm/cm/°C          |             |
| Transverse : -30 to 30°C                         | 8.2E-5             | cm/cm/°C          |             |
| 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.                                               | Type I, 5.0 mm/min |                   |             |
| 5.                                               | Type I, 5.0 mm/min |                   |             |

|     |            |
|-----|------------|
| 6.  | 1.3 mm/min |
| 7.  | 2.0 mm/min |
| 8.  | 1.3 mm/min |
| 9.  | 1.3 mm/min |
| 10. | 80*10*4    |
| 11. | 80*10*4    |
| 12. | 80*10*4 mm |
| 13. | 80*10*4 mm |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

#### Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

