

# LNP™ THERMOCOMP™ BF004 compound

Styrene Acrylonitrile

SABIC Innovative Plastics

## Message:

LNP THERMOCOMP BF004 is a compound based on SAN resin containing 20% Glass Fiber.

Also known as: LNP\* THERMOCOMP\* Compound BF-1004

Product reorder name: BF004

| General Information                                  |                                  |                   |                     |
|------------------------------------------------------|----------------------------------|-------------------|---------------------|
| UL YellowCard                                        | E121562-101343398                |                   |                     |
| Filler / Reinforcement                               | Glass Fiber,20% Filler by Weight |                   |                     |
| Processing Method                                    | Injection Molding                |                   |                     |
| Physical                                             | Nominal Value                    | Unit              | Test Method         |
| Specific Gravity                                     | 1.22                             | g/cm <sup>3</sup> | ASTM D792, ISO 1183 |
| Molding Shrinkage                                    |                                  |                   | ASTM D955           |
| Flow : 24 hr                                         | 0.10 to 0.30                     | %                 |                     |
| Across Flow : 24 hr                                  | 0.30 to 0.50                     | %                 |                     |
| Water Absorption                                     |                                  |                   |                     |
| 24 hr, 50% RH                                        | 0.19                             | %                 | ASTM D570           |
| Equilibrium, 23°C, 50% RH                            | 0.26                             | %                 | ISO 62              |
| Mechanical                                           | Nominal Value                    | Unit              | Test Method         |
| Tensile Modulus                                      |                                  |                   |                     |
| -- <sup>1</sup>                                      | 8270                             | MPa               | ASTM D638           |
| --                                                   | 8230                             | MPa               | ISO 527-2/1         |
| Tensile Strength                                     |                                  |                   |                     |
| Break <sup>2</sup>                                   | 108                              | MPa               | ASTM D638           |
| Break                                                | 103                              | MPa               | ISO 527-2/5         |
| Tensile Elongation                                   |                                  |                   |                     |
| Break <sup>3</sup>                                   | 1.7                              | %                 | ASTM D638           |
| Break                                                | 1.6                              | %                 | ISO 527-2/5         |
| Flexural Modulus                                     |                                  |                   |                     |
| 50.0 mm Span <sup>4</sup>                            | 7590                             | MPa               | ASTM D790           |
| -- <sup>5</sup>                                      | 7290                             | MPa               | ISO 178             |
| Flexural Strength <sup>6</sup> (Break, 50.0 mm Span) | 140                              | MPa               | ASTM D790           |
| Impact                                               | Nominal Value                    | Unit              | Test Method         |
| Notched Izod Impact                                  |                                  |                   |                     |
| 23°C                                                 | 35                               | J/m               | ASTM D256           |
| 23°C <sup>7</sup>                                    | 3.7                              | kJ/m <sup>2</sup> | ISO 180/1A          |
| Unnotched Izod Impact                                |                                  |                   |                     |
| 23°C                                                 | 200                              | J/m               | ASTM D4812          |
| 23°C <sup>8</sup>                                    | 13                               | kJ/m <sup>2</sup> | ISO 180/1U          |

| Instrumented Dart Impact                        |                    |          |             |
|-------------------------------------------------|--------------------|----------|-------------|
| 23°C, Total Energy                              | 7.50               | J        | ASTM D3763  |
| --                                              | 1.70               | J        | ISO 6603-2  |
| Thermal                                         | Nominal Value      | Unit     | Test Method |
| Deflection Temperature Under Load               |                    |          |             |
| 0.45 MPa, Unannealed, 3.20 mm                   | 104                | °C       | ASTM D648   |
| 0.45 MPa, Unannealed, 64.0 mm Span <sup>9</sup> | 104                | °C       | ISO 75-2/Bf |
| 1.8 MPa, Unannealed, 3.20 mm                    | 100                | °C       | ASTM D648   |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>10</sup> | 100                | °C       | ISO 75-2/Af |
| CLTE                                            |                    |          | ASTM D696   |
| Flow : -30 to 30°C                              | 4.4E-5             | cm/cm/°C |             |
| Transverse : -30 to 30°C                        | 4.7E-5             | cm/cm/°C |             |
| Injection                                       | Nominal Value      | Unit     |             |
| Drying Temperature                              | 82.2               | °C       |             |
| Drying Time                                     | 4.0                | hr       |             |
| Suggested Max Moisture                          | 0.15               | %        |             |
| Rear Temperature                                | 204 to 216         | °C       |             |
| Middle Temperature                              | 243 to 254         | °C       |             |
| Front Temperature                               | 277 to 288         | °C       |             |
| Processing (Melt) Temp                          | 260                | °C       |             |
| Mold Temperature                                | 82.2 to 93.3       | °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.                                              | 80*10*4            |          |             |
| 8.                                              | 80*10*3            |          |             |
| 9.                                              | 80*10*4 mm         |          |             |
| 10.                                             | 80*10*4 mm         |          |             |

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