

# LNP™ THERMOCOMP™ RF0029S compound

Polyamide 66

SABIC Innovative Plastics

## Message:

LNP THERMOCOMP RF0029S is a compound based on Nylon 66 resin containing 10% Glass Fiber. Added features of this material include: Flame Retardant, Heat Stabilized.

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

Product reorder name: RF0029S

| General Information              |                                  |       |                      |
|----------------------------------|----------------------------------|-------|----------------------|
| UL YellowCard                    | E121562-101281598                |       |                      |
| Filler / Reinforcement           | Glass Fiber,10% Filler by Weight |       |                      |
| Additive                         | Heat Stabilizer                  |       |                      |
| Features                         | Flame Retardant                  |       |                      |
|                                  | Heat Stabilized                  |       |                      |
|                                  |                                  |       |                      |
| Processing Method                | Injection Molding                |       |                      |
| Physical                         | Nominal Value                    | Unit  | Test Method          |
| Specific Gravity                 | 1.48                             | g/cm³ | ASTM D792, ISO 1183  |
| Molding Shrinkage                |                                  |       |                      |
| Flow : 24 hr                     | 0.90 to 1.1                      | %     | ASTM D955            |
| Across Flow : 24 hr              | 1.2 to 1.4                       | %     | ASTM D955            |
| Across Flow : 24 hr              | 1.3                              | %     | ISO 294-4            |
| Flow : 24 hr                     | 0.98                             | %     | ISO 294-4            |
| Water Absorption (24 hr, 50% RH) | 0.50                             | %     | ASTM D570            |
| Mechanical                       | Nominal Value                    | Unit  | Test Method          |
| Tensile Modulus                  |                                  |       |                      |
| -- <sup>1</sup>                  | 6890                             | MPa   | ASTM D638            |
| --                               | 6370                             | MPa   | ISO 527-2/1          |
| Tensile Strength                 |                                  |       |                      |
| Yield                            | 101                              | MPa   | ASTM D638            |
| Yield                            | 102                              | MPa   | ISO 527-2            |
| Break                            | 101                              | MPa   | ASTM D638            |
| Break                            | 102                              | MPa   | ISO 527-2            |
| Tensile Elongation               |                                  |       | ASTM D638, ISO 527-2 |
| Yield                            | 2.5                              | %     |                      |
| Break                            | 2.5                              | %     |                      |
| Flexural Modulus                 |                                  |       |                      |
| --                               | 5520                             | MPa   | ASTM D790            |
| --                               | 5900                             | MPa   | ISO 178              |
| Flexural Strength                |                                  |       |                      |

|                                                 |                      |                   |                        |
|-------------------------------------------------|----------------------|-------------------|------------------------|
| --                                              | 152                  | MPa               | ASTM D790              |
| --                                              | 150                  | MPa               | ISO 178                |
| <b>Impact</b>                                   | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>     |
| 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>                               | 33                   | kJ/m <sup>2</sup> | ISO 180/1U             |
| Instrumented Dart Impact                        |                      |                   |                        |
| 23°C, Energy at Peak Load                       | 8.50                 | J                 | ASTM D3763             |
| --                                              | 1.90                 | J                 | ISO 6603-2             |
| <b>Thermal</b>                                  | <b>Nominal Value</b> | <b>Unit</b>       | <b>Test Method</b>     |
| Deflection Temperature Under Load               |                      |                   |                        |
| 0.45 MPa, Unannealed, 3.20 mm                   | 253                  | °C                | ASTM D648              |
| 0.45 MPa, Unannealed, 64.0 mm Span <sup>4</sup> | 249                  | °C                | ISO 75-2/Bf            |
| 1.8 MPa, Unannealed, 3.20 mm                    | 234                  | °C                | ASTM D648              |
| 1.8 MPa, Unannealed, 64.0 mm Span <sup>5</sup>  | 219                  | °C                | ISO 75-2/Af            |
| CLTE                                            |                      |                   |                        |
| Flow : -40 to 40°C                              | 7.6E-5               | cm/cm/°C          | ASTM E831, ISO 11359-2 |
| Transverse : -40 to 40°C                        | 4.3E-5               | cm/cm/°C          | ASTM E831              |
| Transverse : -40 to 40°C                        | 4.2E-5               | cm/cm/°C          | ISO 11359-2            |
| <b>Injection</b>                                | <b>Nominal Value</b> | <b>Unit</b>       |                        |
| 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                          | 277 to 288           | °C                |                        |
| Mold Temperature                                | 82.2 to 93.3         | °C                |                        |
| Back Pressure                                   | 0.172 to 0.344       | MPa               |                        |
| Screw Speed                                     | 30 to 60             | rpm               |                        |
| <b>NOTE</b>                                     |                      |                   |                        |
| 1.                                              | 50 mm/min            |                   |                        |
| 2.                                              | 80*10*4              |                   |                        |
| 3.                                              | 80*10*4              |                   |                        |
| 4.                                              | 80*10*4 mm           |                   |                        |
| 5.                                              | 80*10*4 mm           |                   |                        |

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