



## LNP™ THERMOCOMP™ Compound RF006H

### Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound RF-1006

Product reorder name: RF006H

LNP THERMOCOMP™ RF006H is a compound based on Nylon 66 resin containing 30% Glass Fiber. Added feature of this grade is: Healthcare.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                | Standard    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, brk, Type I, 5 mm/min        | 1680          | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, brk, Type I, 5 mm/min        | 2.4           | %                   | ASTM D 638  |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 2390          | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 96200         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, break, 5 mm/min              | 154           | MPa                 | ISO 527     |
| Tensile Strain, break, 5 mm/min              | 2.4           | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 8980          | MPa                 | ISO 527     |
| Flexural Modulus, 2 mm/min                   | 9220          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, unnotched, 23°C                 | 65            | cm-kgf/cm           | ASTM D 4812 |
| Izod Impact, notched, 23°C                   | 5             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Energy @ peak, 23°C      | 66            | cm-kgf              | ASTM D 3763 |
| Multiaxial Impact                            | 26            | cm-kgf              | ISO 6603    |
| Izod Impact, unnotched 80*10*4 +23°C         | 52            | kJ/m <sup>2</sup>   | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C           | 7             | kJ/m <sup>2</sup>   | ISO 180/1A  |
| <b>THERMAL</b>                               |               |                     |             |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 265           | °C                  | ASTM D 648  |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 255           | °C                  | ASTM D 648  |
| CTE, -40°C to 40°C, flow                     | 3.04E-05      | 1/°C                | ASTM E 831  |
| CTE, -40°C to 40°C, xflow                    | 7.32E-05      | 1/°C                | ASTM E 831  |
| CTE, -40°C to 40°C, flow                     | 3.04E-05      | 1/°C                | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow                    | 7.32E-05      | 1/°C                | ISO 11359-2 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 243           | °C                  | ISO 75/Af   |



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| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                                            | Standard             |
|----------------------------------------------|---------------|-------------------------------------------------|----------------------|
| <b>PHYSICAL</b>                              |               |                                                 |                      |
| Specific Gravity                             | 1.41          | -                                               | ASTM D 792           |
| Density                                      | 1.4           | g/cm <sup>3</sup>                               | ASTM D 792           |
| Moisture Absorption, 50% RH, 24 hrs          | 0.69          | %                                               | ASTM D 570           |
| Mold Shrinkage, flow, 24 hrs (5)             | 0.3 - 0.5     | %                                               | ASTM D 955           |
| Mold Shrinkage, xflow, 24 hrs (5)            | 1.4 - 1.6     | %                                               | ASTM D 955           |
| Mold Shrinkage, flow, 24 hrs (5)             | 0.3 - 0.5     | %                                               | ISO 294              |
| Mold Shrinkage, xflow, 24 hrs (5)            | 1.4 - 1.6     | %                                               | ISO 294              |
| Wear Factor Washer                           | 75            | 10 <sup>-10</sup> in <sup>5</sup> -min/ft-lb-hr | ASTM D 3702 Modified |
| Dynamic COF                                  | 0.71          | -                                               | ASTM D 3702 Modified |
| Static COF                                   | 0.57          | -                                               | ASTM D 3702 Modified |
| Density                                      | 1.39          | g/cm <sup>3</sup>                               | ISO 1183             |
| Moisture Absorption (23°C / 50% RH)          | 1.2           | %                                               | ISO 62               |
| <b>FLAME CHARACTERISTICS</b>                 |               |                                                 |                      |
| UL Compliant, 94HB Flame Class Rating (3)(4) | 1.5           | mm                                              | UL 94 by SABIC-IP    |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 80            | °C   |
| Drying Time                 | 4             | hrs  |
| Maximum Moisture Content    | 0.15 - 0.25   | %    |
| Melt Temperature            | 280 - 305     | °C   |
| Front - Zone 3 Temperature  | 295 - 305     | °C   |
| Middle - Zone 2 Temperature | 280 - 295     | °C   |
| Rear - Zone 1 Temperature   | 265 - 275     | °C   |
| Mold Temperature            | 95 - 110      | °C   |
| Back Pressure               | 0.2 - 0.3     | MPa  |
| Screw Speed                 | 30 - 60       | rpm  |