



## LNP™ THERMOCOMP™ Compound RF006ESZ

### Americas: COMMERCIAL

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

Product reorder name: RF006ESZ

LNP THERMOCOMP™ RF006ESZ is a compound based on Nylon 66 resin containing 30% Glass Fiber. Added features of this material include: Easy Molding, Heat Stabilized.

| TYPICAL PROPERTIES <sup>1</sup>         | TYPICAL VALUE | Unit                | Standard    |
|-----------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                       |               |                     |             |
| Tensile Stress, break                   | 1430          | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, break                   | 2.3           | %                   | ASTM D 638  |
| Tensile Modulus, 50 mm/min              | 100500        | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress                         | 2100          | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus                        | 75900         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, break                   | 140           | MPa                 | ISO 527     |
| Tensile Strain, break                   | 2.6           | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min               | 9400          | MPa                 | ISO 527     |
| Flexural Stress                         | 217           | MPa                 | ISO 178     |
| Flexural Modulus                        | 8900          | MPa                 | ISO 178     |
| <b>IMPACT</b>                           |               |                     |             |
| Izod Impact, unnotched, 23°C            | 74            | cm-kgf/cm           | ASTM D 4812 |
| Izod Impact, notched, 23°C              | 8             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Energy @ peak, 23°C | 82            | cm-kgf              | ASTM D 3763 |
| Multiaxial Impact                       | 25            | cm-kgf              | ISO 6603    |
| Izod Impact, unnotched 80*10*4 +23°C    | 46            | kJ/m <sup>2</sup>   | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C      | 8             | kJ/m <sup>2</sup>   | ISO 180/1A  |
| <b>THERMAL</b>                          |               |                     |             |
| HDT, 0.45 MPa, 3.2 mm, unannealed       | 252           | °C                  | ASTM D 648  |
| HDT, 1.82 MPa, 3.2mm, unannealed        | 230           | °C                  | ASTM D 648  |
| CTE, -40°C to 40°C, flow                | 2.97E-05      | 1/°C                | ASTM E 831  |
| CTE, -40°C to 40°C, xflow               | 7.47E-05      | 1/°C                | ASTM E 831  |
| CTE, -40°C to 40°C, flow                | 2.69E-05      | 1/°C                | ISO 11359-2 |



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| <b>THERMAL</b>                               |               |                   |                   |
| CTE, -40°C to 40°C, xflow                    | 7.46E-05      | 1/°C              | ISO 11359-2       |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 222           | °C                | ISO 75/Af         |
| <b>PHYSICAL</b>                              |               |                   |                   |
| Density                                      | 1.4           | g/cm <sup>3</sup> | ASTM D 792        |
| Moisture Absorption, 50% RH, 24 hrs          | 0.87          | %                 | ASTM D 570        |
| Mold Shrinkage, flow, 24 hrs (5)             | 0.2 - 0.4     | %                 | ASTM D 955        |
| Mold Shrinkage, xflow, 24 hrs (5)            | 0.9 - 1.1     | %                 | ASTM D 955        |
| Mold Shrinkage, flow, 24 hrs (5)             | 0.29          | %                 | ISO 294           |
| Mold Shrinkage, xflow, 24 hrs (5)            | 1             | %                 | ISO 294           |
| Density                                      | 1.39          | g/cm <sup>3</sup> | ISO 1183          |
| Moisture Absorption (23°C / 50% RH)          | 1.07          | %                 | 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  |