



## LNP™ THERMOCOMP™ Compound RF0049SP

### Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound RF-1004 FR HS

Product reorder name: RF0049SP

LNP THERMOCOMP RF0049SP is a compound based on Nylon 66 containing 20% Glass Fiber. Added features of this grade include: Flame Retardant, Heat Stabilized.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                | Standard    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, brk, Type I, 5 mm/min        | 1420          | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, yld, Type I, 5 mm/min        | 2.3           | %                   | 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 | 2060          | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 88200         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, break, 5 mm/min              | 140           | MPa                 | ISO 527     |
| Tensile Strain, break, 5 mm/min              | 2.2           | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 9600          | MPa                 | ISO 527     |
| Flexural Modulus, 2 mm/min                   | 8160          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, unnotched, 23°C                 | 61            | cm-kgf/cm           | ASTM D 4812 |
| Izod Impact, notched, 23°C                   | 6             | cm-kgf/cm           | ASTM D 256  |
| Multiaxial Impact                            | 20            | cm-kgf              | ISO 6603    |
| Izod Impact, unnotched 80*10*4 +23°C         | 36            | 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            | 255           | °C                  | ASTM D 648  |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 241           | °C                  | ASTM D 648  |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm       | 253           | °C                  | ISO 75/Bf   |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm        | 235           | °C                  | ISO 75/Af   |
| <b>PHYSICAL</b>                              |               |                     |             |
| Density                                      | 1.55          | g/cm <sup>3</sup>   | ASTM D 792  |
| Mold Shrinkage, flow, 24 hrs (5)             | 0.4 - 0.6     | %                   | ASTM D 955  |
| Mold Shrinkage, xflow, 24 hrs (5)            | 1 - 3         | %                   | ASTM D 955  |



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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            | 275 - 290     | °C   |
| Front - Zone 3 Temperature  | 295 - 305     | °C   |
| Middle - Zone 2 Temperature | 280 - 295     | °C   |
| Rear - Zone 1 Temperature   | 265 - 275     | °C   |
| Mold Temperature            | 80 - 95       | °C   |
| Back Pressure               | 0.2 - 0.3     | MPa  |
| Screw Speed                 | 30 - 60       | rpm  |