



## LNP™ THERMOCOMP™ Compound ZF0049

### Asia Pacific: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound ZF-1004 FR HP

Product reorder name: ZF0049

LNP THERMOCOMP ZF0049 is a compound based on PPE+PS Blend resin containing Flame Retardant. Added features of this material include: Flame Retardant.

| TYPICAL PROPERTIES <sup>1</sup>         | TYPICAL VALUE | Unit                | Standard    |
|---|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                       |               |                     |             |
| Tensile Stress, yield                   | 900           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, break                   | 900           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, yield                   | 1.7           | %                   | ASTM D 638  |
| Tensile Strain, break                   | 1.7           | %                   | ASTM D 638  |
| Tensile Modulus, 50 mm/min              | 70300         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress                         | 2460          | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus                        | 126500        | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield                   | 84            | MPa                 | ISO 527     |
| Tensile Stress, break                   | 84            | MPa                 | ISO 527     |
| Tensile Strain, yield                   | 1.6           | %                   | ISO 527     |
| Tensile Strain, break                   | 1.6           | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min               | 6830          | MPa                 | ISO 527     |
| Flexural Stress                         | 118           | MPa                 | ISO 178     |
| Flexural Modulus                        | 6600          | MPa                 | ISO 178     |
| <b>IMPACT</b>                           |               |                     |             |
| Izod Impact, unnotched, 23°C            | 42            | cm-kgf/cm           | ASTM D 4812 |
| Izod Impact, notched, 23°C              | 8             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Energy @ peak, 23°C | 151           | cm-kgf              | ASTM D 3763 |
| Multiaxial Impact                       | 32            | cm-kgf              | ISO 6603    |
| Izod Impact, unnotched 80*10*4 +23°C    | 25            | 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       | 110           | °C                  | ASTM D 648  |



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| TYPICAL PROPERTIES <sup>1</sup>        | TYPICAL VALUE | Unit              | Standard    |
|--|---------------|-------------------|-------------|
| <b>THERMAL</b>                         |               |                   |             |
| HDT, 1.82 MPa, 3.2mm, unannealed       | 102           | °C                | ASTM D 648  |
| CTE, -40°C to 40°C, flow               | 5.76E-05      | 1/°C              | ASTM E 831  |
| CTE, -40°C to 40°C, xflow              | 3.96E-05      | 1/°C              | ASTM E 831  |
| CTE, -40°C to 40°C, flow               | 5.8E-05       | 1/°C              | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow              | 3.9E-05       | 1/°C              | ISO 11359-2 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 111           | °C                | ISO 75/Bf   |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm  | 104           | °C                | ISO 75/Af   |
| <b>PHYSICAL</b>                        |               |                   |             |
| Density                                | 1.3           | g/cm <sup>3</sup> | ASTM D 792  |
| Mold Shrinkage, flow, 24 hrs (5)       | 0.2 - 0.4     | %                 | ASTM D 955  |
| Mold Shrinkage, xflow, 24 hrs (5)      | 0.4 - 0.6     | %                 | ASTM D 955  |
| Mold Shrinkage, flow, 24 hrs (5)       | 0.28          | %                 | ISO 294     |
| Mold Shrinkage, xflow, 24 hrs (5)      | 0.49          | %                 | ISO 294     |
| Density                                | 1.29          | g/cm <sup>3</sup> | ISO 1183    |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 120           | °C   |
| Drying Time                 | 4             | hrs  |
| Melt Temperature            | 300 - 305     | °C   |
| Front - Zone 3 Temperature  | 300 - 310     | °C   |
| Middle - Zone 2 Temperature | 290 - 300     | °C   |
| Rear - Zone 1 Temperature   | 275 - 290     | °C   |
| Mold Temperature            | 80 - 110      | °C   |
| Back Pressure               | 0.2 - 0.3     | MPa  |
| Screw Speed                 | 30 - 60       | rpm  |