



## LNP™ THERMOCOMP™ Compound AB002

### Americas: COMMERCIAL

Also known as: LNP™ THERMOCOMP™ Compound AB-1002

Product reorder name: AB002

LNP THERMOCOMP AB002 is a compound based on ABS resin containing 10% Glass Bead.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                | Standard    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, yld, Type I, 5 mm/min        | 350           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, brk, Type I, 5 mm/min        | 320           | 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        | 29            | %                   | ASTM D 638  |
| Tensile Modulus, 50 mm/min                   | 28100         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 650           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Stress, brk, 1.3 mm/min, 50 mm span | 640           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 26400         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield, 5 mm/min              | 34            | MPa                 | ISO 527     |
| Tensile Stress, break, 5 mm/min              | 30            | MPa                 | ISO 527     |
| Tensile Strain, yield, 5 mm/min              | 2.2           | %                   | ISO 527     |
| Tensile Strain, break, 5 mm/min              | 24            | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 2600          | MPa                 | ISO 527     |
| Flexural Stress                              | 60            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 2410          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, unnotched, 23°C                 | 56            | cm-kgf/cm           | ASTM D 4812 |
| Izod Impact, notched, 23°C                   | 12            | cm-kgf/cm           | ASTM D 256  |
| Multiaxial Impact                            | 25            | cm-kgf              | ISO 6603    |
| Instrumented Impact Total Energy, 23°C       | 132           | cm-kgf              | ASTM D 3763 |
| Izod Impact, unnotched 80*10*4 +23°C         | 34            | kJ/m <sup>2</sup>   | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C           | 10            | kJ/m <sup>2</sup>   | ISO 180/1A  |



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|----------------------------------------|---------------|-------------------|------------|
| <b>THERMAL</b>                         |               |                   |            |
| HDT, 0.45 MPa, 3.2 mm, unannealed      | 93            | °C                | ASTM D 648 |
| HDT, 1.82 MPa, 3.2mm, unannealed       | 81            | °C                | ASTM D 648 |
| CTE, -30°C to 30°C, flow               | 8.7E-05       | 1/°C              | ASTM D 696 |
| CTE, -30°C to 30°C, xflow              | 8.9E-05       | 1/°C              | ASTM D 696 |
| HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm | 92            | °C                | ISO 75/Bf  |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm  | 79            | °C                | ISO 75/Af  |
| <b>PHYSICAL</b>                        |               |                   |            |
| Density                                | 1.12          | g/cm <sup>3</sup> | ASTM D 792 |
| Moisture Absorption, 50% RH, 24 hrs    | 0.22          | %                 | ASTM D 570 |
| Mold Shrinkage, flow, 24 hrs (5)       | 0.6 - 0.8     | %                 | ASTM D 955 |
| Mold Shrinkage, xflow, 24 hrs (5)      | 0.8 - 1       | %                 | ASTM D 955 |
| Density                                | 1.11          | g/cm <sup>3</sup> | ISO 1183   |
| Moisture Absorption (23°C / 50% RH)    | 0.36          | %                 | ISO 62     |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 80            | °C   |
| Drying Time                 | 4             | hrs  |
| Maximum Moisture Content    | 0.05 - 0.1    | %    |
| Melt Temperature            | 260           | °C   |
| Front - Zone 3 Temperature  | 265 - 275     | °C   |
| Middle - Zone 2 Temperature | 230 - 245     | °C   |
| Rear - Zone 1 Temperature   | 205 - 215     | °C   |
| Mold Temperature            | 70 - 80       | °C   |
| Back Pressure               | 0.2 - 0.3     | MPa  |
| Screw Speed                 | 30 - 60       | rpm  |