# LNP™ THERMOCOMP™ COMPOUND DF0061VI

## DESCRIPTION

LNP THERMOCOMP DF0061VI compound is based on Polycarbonate (PC) resin containing 30% glass fiber. Added features of this grade include: Improved Plating Surface and Mechanical Performance targeted for Laser Direct Structuring (LDS) applications, Non-Brominated, Non-Chlorinated Flame Retardant, Wide Processing Window.

| GENERAL INFORMATION | |
|---|---|
| **Features** | Flame Retardant, Dielectrics, Laser Direct Structuring, Non Cl/Br flame retardant, High stiffness/Strength |
| **Fillers** | Glass Fiber |
| **Polymer Types** | Polycarbonate (PC) |
| **Processing Techniques** | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Automotive | Automotive Interiors |
| Consumer | Personal Accessory |
| Electrical and Electronics | Mobile Phone - Computer - Tablets |
| Industrial | Electrical |

## TYPICAL PROPERTY VALUES

Revision 20260403

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Stress, brk, Type I, 5 mm/min** | 103 | MPa | ASTM D638 |
| **Tensile Strain, brk, Type I, 5 mm/min** | 2 | % | ASTM D638 |
| **Tensile Modulus, 5 mm/min** | 9400 | MPa | ASTM D638 |
| **Flexural Modulus, 1.3 mm/min, 50 mm span** | 8100 | MPa | ASTM D790 |
| **Flexural Strength, 1.3 mm/min, 50 mm span** | 150 | MPa | ASTM D790 |
| **Tensile Stress, break, 5 mm/min** | 106 | MPa | ISO 527 |
| **Tensile Strain, break, 5 mm/min** | 2 | % | ISO 527 |
| **Tensile Modulus, 1 mm/min** | 9300 | MPa | ISO 527 |
| **Flexural Modulus, 2 mm/min** | 8200 | MPa | ISO 178 |
| **Flexural Strength, 2 mm/min** | 150 | MPa | ISO 178 |
| IMPACT [1] | | | |
| **Izod Impact, notched, 23°C** | 70 | J/m | ASTM D256 |
| **Izod Impact, unnotched, 23°C** | 400 | J/m | ASTM D4812 |
| **Izod Impact, notched 80*10*4 +23°C** | 7 | kJ/m² | ISO 180/1A |
| **Izod Impact, unnotched 80*10*4 +23°C** | 30 | kJ/m² | ISO 180/1U |
| **Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm** | 7 | kJ/m² | ISO 179/1eA |
| **Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm** | 30 | kJ/m² | ISO 179/1eU |
| THERMAL [1] | | | |
| **HDT, 0.45 MPa, 3.2 mm, unannealed** | 118 | °C | ASTM D648 |
| **HDT, 1.82 MPa, 3.2mm, unannealed** | 115 | °C | ASTM D648 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **CTE, -40°C to 40°C, flow** | 2.2E-05 | 1/°C | ASTM E831 |
| **CTE, -40°C to 40°C, xflow** | 6.0E-05 | 1/°C | ASTM E831 |
| **CTE, -40°C to 40°C, flow** | 2.1E-05 | 1/°C | ISO 11359-2 |
| **CTE, -40°C to 40°C, xflow** | 6.2E-05 | 1/°C | ISO 11359-2 |
| **PHYSICAL** [1] | | | |
| **Density** | 1.5 | g/cm³ | ASTM D792 |
| **Melt Flow Rate** | | | |
| 300°C/1.2 kgf | 13 | g/10 min | ASTM D1238 |
| 300°C/2.16 kgf | 25 | g/10 min | ASTM D1238 |
| **Mold Shrinkage, flow** [2] | 0.1 – 0.3 | % | SABIC method |
| **Mold Shrinkage, xflow** [2] | 0.1 – 0.3 | % | SABIC method |
| **ELECTRICAL** [1] | | | |
| **Dielectric Constant** | | | |
| 1.1 GHz | 3.590 | - | SABIC method |
| 1.9 GHz | 3.520 | - | SABIC method |
| 5 GHz | 3.520 | - | SABIC method |
| 10 GHz | 3.520 | - | SABIC method |
| 20 GHz | 3.300 | - | SABIC method |
| **Dissipation Factor** | | | |
| 1.1 GHz | 0.009 | - | SABIC method |
| 1.9 GHz | 0.008 | - | SABIC method |
| 5 GHz | 0.008 | - | SABIC method |
| 10 GHz | 0.008 | - | SABIC method |
| 20 GHz | 0.008 | - | SABIC method |
| **FLAME CHARACTERISTICS** [3] | | | |
| **UL Yellow Card Link** | E207780-104560651 | - | - |
| **UL Recognized, 94V-0 Flame Class Rating** | ≥0.6 | mm | UL 94 |
| **INJECTION MOLDING** [4] | | | |
| **Drying Temperature** | 110 – 120 | °C | |
| **Drying Time** | 3 – 4 | Hrs | |
| **Melt Temperature** | 290 – 310 | °C | |
| **Nozzle Temperature** | 285 – 310 | °C | |
| **Front - Zone 3 Temperature** | 285 – 310 | °C | |
| **Middle - Zone 2 Temperature** | 285 – 310 | °C | |
| **Rear - Zone 1 Temperature** | 285 – 310 | °C | |
| **Mold Temperature** | 100 – 130 | °C | |
| **Back Pressure** | 0.1 – 0.3 | MPa | |
| **Screw Speed** | 50 – 150 | rpm | |

(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.

(3) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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