# LNP™ THERMOCOMP™ COMPOUND DX11354X

## DESCRIPTION

LNP THERMOCOMP DX11354X compound is based on Polycarbonate (PC) resin containing proprietary fillers. Added features of this grade include: Improved Plating Surface and Mechanical Performance targeted for Laser Direct Structuring (LDS) applications, Improved Impact, Colorable.

| GENERAL INFORMATION | |
|---|---|
| **Features** | Dielectrics, Laser Direct Structuring, Impact resistant, No PFAS intentionally added |
| **Fillers** | Unreinforced |
| **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 20260708

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Stress, yld, Type I, 50 mm/min** | 55 | MPa | ASTM D638 |
| **Tensile Stress, brk, Type I, 50 mm/min** | 45 | MPa | ASTM D638 |
| **Tensile Strain, yld, Type I, 50 mm/min** | 5 | % | ASTM D638 |
| **Tensile Strain, brk, Type I, 50 mm/min** | 70 | % | ASTM D638 |
| **Tensile Modulus, 50 mm/min** | 2400 | MPa | ASTM D638 |
| **Flexural Stress, yld, 1.3 mm/min, 50 mm span** | 86 | MPa | ASTM D790 |
| **Flexural Modulus, 1.3 mm/min, 50 mm span** | 2380 | MPa | ASTM D790 |
| **Tensile Stress, yield, 50 mm/min** | 54 | MPa | ISO 527 |
| **Tensile Stress, break, 50 mm/min** | 51 | MPa | ISO 527 |
| **Tensile Strain, yield, 50 mm/min** | 5 | % | ISO 527 |
| **Tensile Strain, break, 50 mm/min** | 84 | % | ISO 527 |
| **Tensile Modulus, 1 mm/min** | 2320 | MPa | ISO 527 |
| **Flexural Stress, yield, 2 mm/min** | 86 | MPa | ISO 178 |
| **Flexural Modulus, 2 mm/min** | 2450 | MPa | ISO 178 |
| IMPACT [1] | | | |
| **Izod Impact, notched, 23°C** | 700 | J/m | ASTM D256 |
| **Izod Impact, notched 80*10*3 +23°C** | 60 | kJ/m² | ISO 180/1A |
| THERMAL [1] | | | |
| **Vicat Softening Temp, Rate A/50** | 136 | °C | ASTM D1525 |
| **HDT, 1.82 MPa, 3.2mm, unannealed** | 121 | °C | ASTM D648 |
| **CTE, -40°C to 40°C, flow** | 6.5E-05 | 1/°C | ASTM E831 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| CTE, -40°C to 40°C, xflow | 7.1E-05 | 1/°C | ASTM E831 |
| Vicat Softening Temp, Rate B/50 | 136 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 117 | °C | ISO 75/Af |
| Relative Temp Index, Elec [2] | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/impact [2] | 80 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact [2] | 80 | °C | UL 746B |
| PHYSICAL [1] | | | |
| Mold Shrinkage, flow, 24 hrs [3] | 0.5 – 0.7 | % | ISO 294 |
| Mold Shrinkage, xflow, 24 hrs [3] | 0.5 – 0.7 | % | ISO 294 |
| Density | 1.28 | g/cm³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 0.05 | % | ISO 62 |
| Melt Volume Rate | | | |
| 300°C/1.2 kg | 25 | cm³/10 min | ISO 1133 |
| ELECTRICAL [1] | | | |
| Volume Resistivity | 1.E+16 | Ω.cm | ASTM D257 |
| Surface Resistivity | 1.E+16 | Ω | ASTM D257 |
| Relative Permittivity, 1 GHz | 3.03 | - | ASTM D150 |
| Dissipation Factor | | | |
| 1 GHz | 0.0066 | - | ASTM D150 |
| FLAME CHARACTERISTICS [2] | | | |
| UL Yellow Card Link | E207780-101474809 | - | - |
| UL Recognized, 94HB Flame Class Rating | ≥1 | mm | UL 94 |
| INJECTION MOLDING [4] | | | |
| Drying Temperature | 110 – 120 | °C | |
| Drying Time | 2 – 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 260 – 280 | °C | |
| Nozzle Temperature | 255 – 275 | °C | |
| Front - Zone 3 Temperature | 260 – 280 | °C | |
| Middle - Zone 2 Temperature | 260 – 280 | °C | |
| Rear - Zone 1 Temperature | 245 – 265 | °C | |
| Hopper Temperature | 40 – 60 | °C | |
| Mold Temperature | 80 – 140 | °C | |

(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) 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.

(3) 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.

(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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