# LNP™ THERMOCOMP™ COMPOUND NX10302

## DESCRIPTION

LNP THERMOCOMP NX10302 compound is based on Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend containing proprietary fillers and available in black color only. Added features of this grade include: Improved Plating Surface and Mechanical Performance targeted for Laser Direct Structuring (LDS) applications.

| GENERAL INFORMATION | |
|---|---|
| **Features** | Dielectrics, Laser Direct Structuring, No PFAS intentionally added |
| **Fillers** | Unreinforced |
| **Polymer Types** | Polycarbonate + ABS (PC+ABS) |
| **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 20260506

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **MECHANICAL** [1] | | | |
| **Tensile Stress, yld, Type I, 5 mm/min** | 46 | MPa | ASTM D638 |
| **Tensile Stress, brk, Type I, 5 mm/min** | 47 | MPa | ASTM D638 |
| **Tensile Strain, yld, Type I, 5 mm/min** | 4.2 | % | ASTM D638 |
| **Tensile Strain, brk, Type I, 5 mm/min** | 100 | % | ASTM D638 |
| **Tensile Modulus, 50 mm/min** | 2480 | MPa | ASTM D638 |
| **Flexural Stress, yld, 1.3 mm/min, 50 mm span** | 80 | MPa | ASTM D790 |
| **Flexural Stress, brk, 1.3 mm/min, 50 mm span** | 79 | MPa | ASTM D790 |
| **Flexural Modulus, 1.3 mm/min, 50 mm span** | 2400 | MPa | ASTM D790 |
| **IMPACT** [1] | | | |
| **Izod Impact, Unnotched** | | | |
| 23°C | NB | J/m | ASTM D4812 |
| **Izod impact, notched** | | | |
| 23°C | 600 | J/m | ASTM D256 |
| **THERMAL** [1] | | | |
| **HDT, 1.82 MPa, 3.2mm, unannealed** | 108 | °C | ASTM D648 |
| **CTE, -40°C to 40°C, flow** | 8.47E-05 | 1/°C | ASTM E831 |
| **CTE, -40°C to 40°C, xflow** | 9.1E-05 | 1/°C | ASTM E831 |
| **Relative Temp Index, Elec** [2] | 60 | °C | UL 746B |
| **Relative Temp Index, Mech w/impact** [2] | 60 | °C | UL 746B |
| **Relative Temp Index, Mech w/o impact** [2] | 60 | °C | UL 746B |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **PHYSICAL** [1] | | | |
| **Density** | 1.26 | g/cm³ | ASTM D792 |
| **Water Absorption, (23°C/24hrs)** | 0.01 | % | ASTM D570 |
| **Moisture Absorption, (23°C/50% RH/24 hrs)** | 0.02 | % | ASTM D570 |
| **Mold Shrinkage, flow, 24 hrs** [3] | 0.6 – 0.65 | % | ASTM D955 |
| **Mold Shrinkage, xflow, 24 hrs** [3] | 0.5 – 0.56 | % | ASTM D955 |
| **Melt Volume Rate** | | | |
| 260°C/5.0 kg | 14 | cm³/10 min | ISO 1133 |
| **ELECTRICAL** [1] | | | |
| **Relative Permittivity, 1 GHz** | 2.74 | - | IEC 60250 |
| **Dissipation Factor** | | | |
| 1 GHz | 0.003 | - | IEC 60250 |
| **FLAME CHARACTERISTICS** [2] | | | |
| **UL Yellow Card Link** | E207780-101343771 | - | - |
| **UL Recognized, 94HB Flame Class Rating** | 0.6 | mm | UL 94 |
| **INJECTION MOLDING** [4] | | | |
| **Drying Temperature** | 85 – 100 | °C | |
| **Drying Time** | 6 – 8 | Hrs | |
| **Melt Temperature** | 250 – 290 | °C | |
| **Nozzle Temperature** | 250 – 290 | °C | |
| **Front - Zone 3 Temperature** | 250 – 280 | °C | |
| **Middle - Zone 2 Temperature** | 250 – 270 | °C | |
| **Rear - Zone 1 Temperature** | 250 – 270 | °C | |
| **Mold Temperature** | 60 – 90 | °C | |
| **Back Pressure** | 0.3 – 0.7 | MPa | |
| **Screw Speed** | 40 – 70 | 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) 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.

## MORE INFORMATION

For curve data and CAE cards, please visit and register at https://materialfinder.sabic-specialties.com

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