# LNP™ THERMOCOMP™ Compound BF004

BF-1004

## DESCRIPTION

LNP THERMOCOMP BF004 compound is based on Styrene-Acrylonitrile (SAN) resin containing 20% glass fiber.

| GENERAL INFORMATION | |
|---|---|
| **Features** | High stiffness/Strength, No PFAS intentionally added |
| **Fillers** | Glass Fiber (Total fluorine >50ppm only from inorganic fluorine) |
| **Polymer Types** | Styrene Acrylonitrile (SAN) |
| **Processing Techniques** | Injection Molding |

| INDUSTRY | SUB INDUSTRY |
|---|---|
| Building and Construction | Building Component |
| Consumer | Sport/Leisure, Personal Accessory |
| Electrical and Electronics | Mobile Phone - Computer - Tablets |
| Industrial | Electrical |

## TYPICAL PROPERTY VALUES

Revision 20231109

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Stress, break, 5 mm/min** | 103 | MPa | ISO 527 |
| **Tensile Strain, break, 5 mm/min** | 1.6 | % | ISO 527 |
| **Tensile Modulus, 1 mm/min** | 8220 | MPa | ISO 527 |
| **Flexural Strength, 2 mm/min** | 140 | MPa | ISO 178 |
| **Flexural Modulus, 2 mm/min** | 7280 | MPa | ISO 178 |
| **Tensile Modulus, 5 mm/min** | 8260 | MPa | ASTM D638 |
| **Tensile Stress, brk, Type I, 5 mm/min** | 108 | MPa | ASTM D638 |
| **Tensile Strain, brk, Type I, 5 mm/min** | 1.7 | % | ASTM D638 |
| **Flexural Strength, 1.3 mm/min, 50 mm span** | 140 | MPa | ASTM D790 |
| **Flexural Modulus, 1.3 mm/min, 50 mm span** | 7590 | MPa | ASTM D790 |
| IMPACT [1] | | | |
| **Izod Impact, unnotched 80*10*3 +23°C** | 12 | kJ/m² | ISO 180/1U |
| **Izod Impact, notched 80*10*4 +23°C** | 3 | kJ/m² | ISO 180/1A |
| **Multiaxial Impact** | 1 | J | ISO 6603 |
| **Izod Impact, notched, 23°C** | 35 | J/m | ASTM D256 |
| **Izod Impact, unnotched, 23°C** | 196 | J/m | ASTM D4812 |
| **Instrumented Dart Impact Total Energy, 23°C** | 7 | J | ASTM D3763 |
| THERMAL [1] | | | |
| **HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm** | 104 | °C | ISO 75/Bf |
| **HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm** | 100 | °C | ISO 75/Af |
| **HDT, 0.45 MPa, 3.2 mm, unannealed** | 104 | °C | ASTM D648 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| HDT, 1.82 MPa, 3.2mm, unannealed | 100 | °C | ASTM D648 |
| CTE, -30°C to 30°C, flow | 4.4E-05 | 1/°C | ASTM D696 |
| CTE, -30°C to 30°C, xflow | 4.7E-05 | 1/°C | ASTM D696 |
| PHYSICAL [1] | | | |
| Density | 1.22 | g/cm³ | ISO 1183 |
| Moisture Absorption (23°C / 50% RH) | 0.26 | % | ISO 62 |
| Density | 1.22 | g/cm³ | ASTM D792 |
| Moisture Absorption, (23°C/50% RH/24 hrs) | 0.19 | % | ASTM D570 |
| Mold Shrinkage, flow, 24 hrs [2] | 0.1 – 0.3 | % | ASTM D955 |
| Mold Shrinkage, xflow, 24 hrs [2] | 0.3 – 0.5 | % | ASTM D955 |
| FLAME CHARACTERISTICS [3] | | | |
| UL Yellow Card Link | E121562-101343398 | - | - |
| UL Recognized, 94HB Flame Class Rating | 3 | mm | UL 94 |
| INJECTION MOLDING [4] | | | |
| Drying Temperature | 80 | °C | |
| Drying Time | 4 | Hrs | |
| Maximum Moisture Content | 0.15 | % | |
| Melt Temperature | 260 | °C | |
| Front - Zone 3 Temperature | 275 – 290 | °C | |
| Middle - Zone 2 Temperature | 245 – 255 | °C | |
| Rear - Zone 1 Temperature | 205 – 215 | °C | |
| Mold Temperature | 80 – 95 | °C | |
| Back Pressure | 0.2 – 0.3 | MPa | |
| Screw Speed | 30 – 60 | 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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