# LNP™ THERMOCOMP™ Compound RF004

RF-1004
REGION EUROPE

## DESCRIPTION

LNP THERMOCOMP RF004 compound is based on Nylon 6/6 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** | Polyamide 66 (Nylon 66) |
| **Processing Techniques** | Injection Molding |

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

## TYPICAL PROPERTY VALUES

Revision 20260204

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| **Tensile Stress, break, 5 mm/min** | 130 | MPa | ISO 527 |
| **Tensile Strain, break, 5 mm/min** | 3.5 | % | ISO 527 |
| **Tensile Modulus, 1 mm/min** | 7150 | MPa | ISO 527 |
| **Flexural Stress, break, 2 mm/min** | 190 | MPa | ISO 178 |
| **Flexural Modulus, 2 mm/min** | 6800 | MPa | ISO 178 |
| **Hardness, Rockwell L** | 112 | - | ISO 2039-2 |
| IMPACT [1] | | | |
| **Izod Impact, notched 80*10*4 +23°C** | 7 | kJ/m² | ISO 180/1A |
| **Izod Impact, notched 80*10*4 -20°C** | 5 | kJ/m² | ISO 180/1A |
| **Izod Impact, notched 80*10*4 -40°C** | 4 | kJ/m² | ISO 180/1A |
| **Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm** | 65 | kJ/m² | ISO 179/1eU |
| THERMAL [1] | | | |
| **Thermal Conductivity** | 0.33 | W/m-°C | ISO 8302 |
| **CTE, 23°C to 60°C, flow** | 3.1E-05 | 1/°C | ISO 11359-2 |
| **CTE, 23°C to 60°C, xflow** | 9.5E-05 | 1/°C | ISO 11359-2 |
| **Vicat Softening Temp, Rate B/120** | 255 | °C | ISO 306 |
| **HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm** | 245 | °C | ISO 75/Be |
| **HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm** | 230 | °C | ISO 75/Ae |
| PHYSICAL [1] | | | |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Mold Shrinkage on Tensile Bar, flow [2] | 0.2 – 0.5 | % | SABIC method |
| Density | 1.29 | g/cm³ | ISO 1183 |
| Water Absorption, (23°C/saturated) | 5.5 | % | ISO 62-1 |
| ELECTRICAL [1] | | | |
| Volume Resistivity | >1.E+16 | Ω.cm | IEC 60093 |
| Surface Resistivity, ROA | >1.E+16 | Ω | IEC 60093 |
| Dielectric Strength, in oil, 3.2 mm | 19 | kV/mm | IEC 60243-1 |
| Relative Permittivity, 1 MHz | 3.2 | - | IEC 60250 |
| Dissipation Factor, 50/60 Hz | 0.0068 | - | IEC 60250 |
| Dissipation Factor, 1 MHz | 0.015 | - | IEC 60250 |
| Comparative Tracking Index | 500 | V | IEC 60112 |
| Comparative Tracking Index, M | 400 | V | IEC 60112 |
| Relative Permittivity, 50/60 Hz | 3.4 | - | IEC 60250 |
| FLAME CHARACTERISTICS | | | |
| Oxygen Index (LOI) | 27 | % | ISO 4589 |
| FMVSS Burning Speed, thickness 2 mm | 10 | mm/min | FMVSS 302 |
| FMVSS Burning Speed, thickness 3 mm | 5 | mm/min | FMVSS 302 |
| INJECTION MOLDING [3] | | | |
| Drying Temperature | 75 – 85 | °C | |
| Drying Time | 4 – 6 | Hrs | |
| Maximum Moisture Content | 0.2 | % | |
| Melt Temperature | 260 – 290 | °C | |
| Nozzle Temperature | 250 – 270 | °C | |
| Front - Zone 3 Temperature | 260 – 280 | °C | |
| Middle - Zone 2 Temperature | 260 – 280 | °C | |
| Rear - Zone 1 Temperature | 270 – 290 | °C | |
| Hopper Temperature | 60 – 80 | °C | |
| Mold Temperature | 70 – 120 | °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) 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) 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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