# LNP™ THERMOCOMP™ COMPOUND FX10009

FX10009

## DESCRIPTION

LNP THERMOCOMP FX10009 compound is based on Polyethylene (PE) resin containing proprietary fillers. Added features of this grade include: Improved Dielectric Properties.

| GENERAL INFORMATION | |
|---|---|
| **Features** | Dielectrics, No PFAS intentionally added |
| **Fillers** | Unreinforced |
| **Polymer Types** | Polyethylene, Unspecified (PE, Unspecified) |
| **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 20260608

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **MECHANICAL** [1] | | | |
| **Tensile Stress, break, 5 mm/min** | 20 | MPa | ISO 527 |
| **Tensile Strain, break, 5 mm/min** | 1.2 | % | ISO 527 |
| **Tensile Modulus, 1 mm/min** | 2550 | MPa | ISO 527 |
| **Flexural Stress, break, 2 mm/min** | 15 | MPa | ISO 178 |
| **Flexural Modulus, 2 mm/min** | 2750 | MPa | ISO 178 |
| **IMPACT** [1] | | | |
| **Izod Impact, unnotched 80*10*4 +23°C** | 5.5 | kJ/m² | ISO 180/1U |
| **Izod Impact, notched 80*10*4 +23°C** | 3.5 | kJ/m² | ISO 180/1A |
| **THERMAL** [1] | | | |
| **CTE, 23°C to 60°C, flow** | 1.30E-04 | 1/°C | ISO 11359-2 |
| **CTE, 23°C to 60°C, xflow** | 1.50E-04 | 1/°C | ISO 11359-2 |
| **HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm** | 100 | °C | ISO 75/Bf |
| **HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm** | 60 | °C | ISO 75/Af |
| **PHYSICAL** [1] | | | |
| **Melt Volume Rate** | | | |
| 190°C/10.0 kg | 7.5 | cm³/10 min | ISO 1133 |
| 220°C/10.0 kg | 12.5 | cm³/10 min | ISO 1133 |
| **Mold Shrinkage, flow** [2] | 1.5 – 2.0 | % | SABIC method |
| **Density** | 2.50 | g/cm³ | ISO 1183 |
| **Water Absorption, (23°C/24hrs)** | 0.08 | % | ISO 62-1 |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| **ELECTRICAL** [1] | | | |
| **Relative Permittivity** | | | |
| 100 MHz | 13.6 | - | IEC 60250 |
| 500 MHz | 13.4 | - | IEC 60250 |
| 1 GHz | 13.1 | - | IEC 60250 |
| **Dissipation Factor** | | | |
| 100 MHz | 0.009 | - | IEC 60250 |
| 500 MHz | 0.008 | - | IEC 60250 |
| 1 GHz | 0.008 | - | IEC 60250 |
| **INJECTION MOLDING** [3] | | | |
| **Drying Temperature** | 80 | °C | |
| **Drying Time** | 4 | Hrs | |
| **Maximum Moisture Content** | 0.03 | % | |
| **Melt Temperature** | 210 – 215 | °C | |
| **Front - Zone 3 Temperature** | 205 – 215 | °C | |
| **Middle - Zone 2 Temperature** | 200 – 210 | °C | |
| **Rear - Zone 1 Temperature** | 190 – 200 | °C | |
| **Mold Temperature** | 15 – 55 | °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) 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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