# LNP™ THERMOCOMP™ Compound 6F006

(PC+PBT)-GF30 — Saudi Basic Industries Corporation (SABIC)

## Product Texts

LNP THERMOCOMP 6F006 compound is a 30% glass fiber filled PBT/PC copolymer based compound, which has been optimized for LASER welding technology. Added features of this material include: infrared transparency, high modulus, improved warpage control, and optionally, a black color targeted for LASER transparency or for LASER absorption.

| Processing/Physical Characteristics | Value | Unit | Test Standard |
|---|---|---|---|
| **ASTM Data** | | | |
| Melt Flow Index, MFI | **28** | g/10min | ASTM D 1238 |
| Temperature | **250** | °C | - |
| Load | **5** | kg | - |
| **Other Standards**[S] | | | |
| Mold Shrinkage, MD | **0.003** | mm/mm | Producer Method |
| Mold Shrinkage, TD | **0.0075** | mm/mm | Producer Method |

S: These properties are reported by the producer according standards that are different to our defaults.

| Mechanical properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Tensile Modulus | **12300** | MPa | ISO 527 |
| Stress at break | **140** | MPa | ISO 527 |
| Strain at break | **2.1** | % | ISO 527 |
| Flexural modulus, 23°C | **10300** | MPa | ISO 178 |
| Flexural strength | **220** | MPa | ISO 178 |
| Charpy notched impact strength, +23°C | **9** | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | **9** | kJ/m² | ISO 179/1eA |
| Izod impact strength, +23°C | **60** | kJ/m² | ISO 180/1U |
| Izod notched impact strength, +23°C | **10** | kJ/m² | ISO 180/1A |
| Izod notched impact strength | **10** | kJ/m² | ISO 180/1A |
| Temperature | **-30** | °C | - |
| Ball indentation hardness | **240** | MPa | ISO 2039-1 |
| **ASTM Data** | | | |
| Tensile Modulus | **11250** | MPa | ASTM D 638 |
| Tensile Strength at Break | **140** | MPa | ASTM D 638 |
| Elongation at Break | **2.3** | % | ASTM D 638 |
| Flexural Modulus | **10300** | MPa | ASTM D 790 |
| Flexural Strength | **210** | MPa | ASTM D 790 |
| Izod Impact notched, 1/8 in | **80** | J/m | ASTM D 256 |
| Izod Impact notched, Low-Temperature | **75** | J/m | ASTM D 256 |
| Temperature | **-30** | °C | - |
| Izod Impact unnotched, 1/8 in | **700** | J/m | ASTM D 256 |

| Thermal properties | Value | Unit | Test Standard |
|---|---|---|---|
| **ISO Data** | | | |
| Temp. of deflection under load, 1.80 MPa | **195** | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 0.45 MPa | **215** | °C | ISO 75-1/-2 |
| Vicat softening temperature, A | **215** | °C | ISO 306 |
| Vicat softening temperature, B | **200** | °C | ISO 306 |
| Coeff. of linear therm. expansion, parallel | **20** | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion, normal | **80** | E-6/K | ISO 11359-1/-2 |
| **ASTM Data** | | | |
| Coefficient of Thermal Expansion, MD | **25** | E-6/K | ASTM D 696 |
| Coefficient of Thermal Expansion, TD | **70** | E-6/K | ASTM D 696 |
| DTUL @ 66 psi | **215** | °C | ASTM D 648 |
| DTUL @ 264 psi | **190** | °C | ASTM D 648 |
| Vicat Temperature | **200** | °C | ASTM D 1525 |

| Other properties | Value | Unit | Test Standard |
|---|---|---|---|
| Water absorption | **0.45** | % | Sim. to ISO 62 |
| Humidity absorption | **0.09** | % | Sim. to ISO 62 |
| Density | **1530** | kg/m³ | ISO 1183 |

| | | | |
|---|---|---|---|
| Water Absorption, 24hr | **0.25** | % | ASTM D 570 |
| Density | **1530** | kg/m³ | ASTM D 792 |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|---|---|---|
| Pre-drying - Temperature | **120** | °C | - |
| Pre-drying - Time | **3 - 4** | h | - |
| Processing humidity | **≤0.05** | % | - |
| Melt temperature | **250 - 280** | °C | - |
| Mold temperature | **65 - 110** | °C | - |
| Zone 1 | **250 - 260** | °C | - |
| Zone 2 | **250 - 270** | °C | - |
| Zone 3 | **250 - 280** | °C | - |
| Nozzle temperature | **240 - 270** | °C | - |
| Screw speed | **50 - 80** | rpm | - |
| Back pressure | **0.3 - 0.7** | MPa | - |

## Characteristics

**Processing**
Injection Molding

**Applications**
Automotive, Electrical and Electronical

**Features**
Low Warpage, Weldable, Copolymer

**Regional Availability**
North America, Europe, Asia Pacific, South and Central America