

Crastin® LW9030FR NC010

THERMOPLASTIC POLYESTER RESIN

Product Description

Crastin® LW9030FR NC010 is a 30% glass fiber reinforced, flame retardant polybutylene terephthalate alloy for injection molding. It has improved surface aesthetics, excellent dimensional stability and low warpage characteristics.

General

| | | | |
|-------------------------------|---|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Asia Pacific | • Europe | • North America |
| Filler / Reinforcement | • Glass Fiber Reinforcement, 30% Filler by Weight | | |
| Features | • Flame Retardant • Good Chemical Resistance • Good Dimensional Stability | • Good Processability • Low Moisture Absorption • Low Warpage | • Pleasing Surface Appearance • Warp Resistant |
| Uses | • Housings | • Industrial Applications | |
| RoHS Compliance | • Contact Manufacturer | | |
| Appearance | • Natural Color | | |
| Processing Method | • Injection Molding | | |
| Multi-Point Data | • Isothermal Stress vs. Strain (ISO 11403-1) | • Viscosity vs. Shear Rate (ISO 11403-2) | |
| Part Marking Code (ISO 11469) | • >PBT+ASA-GF30FR(17)< | | |
| Resin ID (ISO 1043) | • PBT+ASA-GF30FR(17) | | |
| Product Category | • Flame Retardant Resins | • Glass Reinforced Resins | • Low Warp Resins |

| Physical | Nominal Value Unit | Test Method |
|--|-----------------------------|-------------|
| Density | 1.57 g/cm ³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (250°C/5.0 kg) | 10.0 cm ³ /10min | ISO 1133 |
| Molding Shrinkage | | ISO 294-4 |
| Across Flow: 2.00 mm | 0.75 % | |
| Flow: 2.00 mm | 0.30 % | |
| Water Absorption | | ISO 62 |
| Saturation, 23°C | 0.72 % | |
| Equilibrium, 23°C, 50% RH | 0.21 % | |

| Mechanical | Nominal Value Unit | Test Method |
|------------------------------|--------------------|-------------|
| Tensile Modulus (23°C) | 10500 MPa | ISO 527-2 |
| Tensile Stress (Break, 23°C) | 125 MPa | ISO 527-2 |
| Tensile Strain (Break, 23°C) | 1.8 % | ISO 527-2 |
| Tensile Creep Modulus | | ISO 899-1 |
| 1 hr | 9500 MPa | |
| 1000 hr | 7400 MPa | |
| Flexural Strength (23°C) | 175 MPa | ISO 178 |

| Impact | Nominal Value Unit | Test Method |
|----------------------------------|-----------------------|-------------|
| Charpy Notched Impact Strength | | ISO 179/1eA |
| -30°C | 8.0 kJ/m ² | |
| 23°C | 8.0 kJ/m ² | |
| Charpy Unnotched Impact Strength | | ISO 179/1eU |
| -30°C | 40 kJ/m ² | |
| 23°C | 40 kJ/m ² | |
| Notched Izod Impact Strength | | ISO 180/1A |
| -30°C | 7.0 kJ/m ² | |
| 23°C | 7.0 kJ/m ² | |
| Unnotched Izod Impact Strength | | ISO 180/1U |
| -30°C | 35 kJ/m ² | |
| 23°C | 35 kJ/m ² | |

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Tel: +1 302 999-4592

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| Thermal | Nominal Value Unit | Test Method |
|--|--------------------|--------------------------|
| Heat Deflection Temperature | | |
| 0.45 MPa, Unannealed | 220 °C | ISO 75-2/B |
| 1.8 MPa, Unannealed | 190 °C | ISO 75-2/A |
| 8.0 MPa, Unannealed | 106 °C | ISO 75-2/C |
| Melting Temperature ² | 225 °C | ISO 11357-3 |
| CLTE | | ASTM E831 ISO 11359-2 |
| Flow: 23 to 55°C | 0.000025 cm/cm/°C | |
| Transverse: 23 to 55°C | 0.000080 cm/cm/°C | |
| Electrical | Nominal Value Unit | Test Method |
| Surface Resistivity | 1.0E+14 ohm | IEC 60093 |
| Volume Resistivity | > 1.0E+15 ohm·cm | IEC 60093 |
| Relative Permittivity | | IEC 60250 |
| 23°C, 100 Hz | 3.80 | |
| 23°C, 1 MHz | 3.60 | |
| Dissipation Factor | | IEC 60250 |
| 23°C, 100 Hz | 0.0030 | |
| 23°C, 1 MHz | 0.015 | |
| Comparative Tracking Index | 375 V | IEC 60112 |
| Electric Strength | | IEC 60243-1 |
| 23°C, 1.00 mm | 28 kV/mm | |
| 23°C, 2.00 mm ³ | 20 kV/mm | |
| Flammability | Nominal Value Unit | Test Method |
| Flame Rating - UL (0.750 mm) | V-0 | UL 94 |
| Flammability Classification | | IEC 60695-11-10, -20 |
| 0.750 mm | V-0 | |
| 3.00 mm | 5VA | |
| Glow Wire Flammability Index (3.00 mm) | 960 °C | IEC 60695-2-12 |
| Oxygen Index | 27 % | ISO 4589-2 |
| UL | Nominal Value Unit | Test Method |
| RTI Str | | UL 746 |
| 0.750 mm | 130 °C | |
| 1.50 mm | 130 °C | |
| 3.00 mm | 140 °C | |
| RTI Imp | | UL 746 |
| 0.750 mm | 125 °C | |
| 1.50 mm | 125 °C | |
| 3.00 mm | 130 °C | |
| RTI Elec (0.750 mm) | 140 °C | UL 746 |
| Comparative Tracking Index (CTI) | 300 V | UL 746 |
| Injection | Nominal Value Unit | |
| Drying Temperature | 110 to 130 °C | |
| Drying Time | 2.0 to 4.0 hr | |
| Suggested Max Moisture | < 0.040 % | |
| Processing (Melt) Temp | 240 to 260 °C | |
| Melt Temperature, Optimum | 250 °C | |
| Mold Temperature | 30.0 to 130 °C | |
| Mold Temperature, Optimum | 80 °C | |
| Drying Recommended | Yes | |

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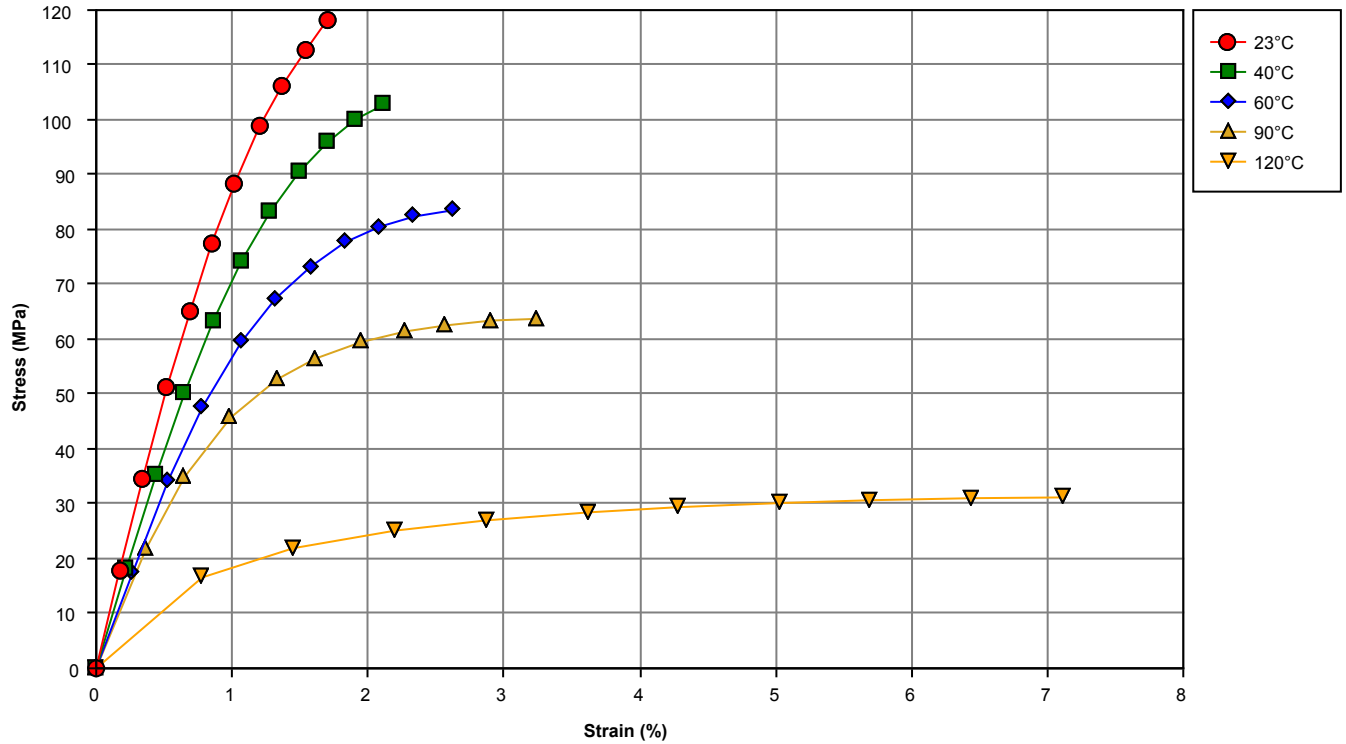


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Isothermal Stress vs. Strain (ISO 11403-1)



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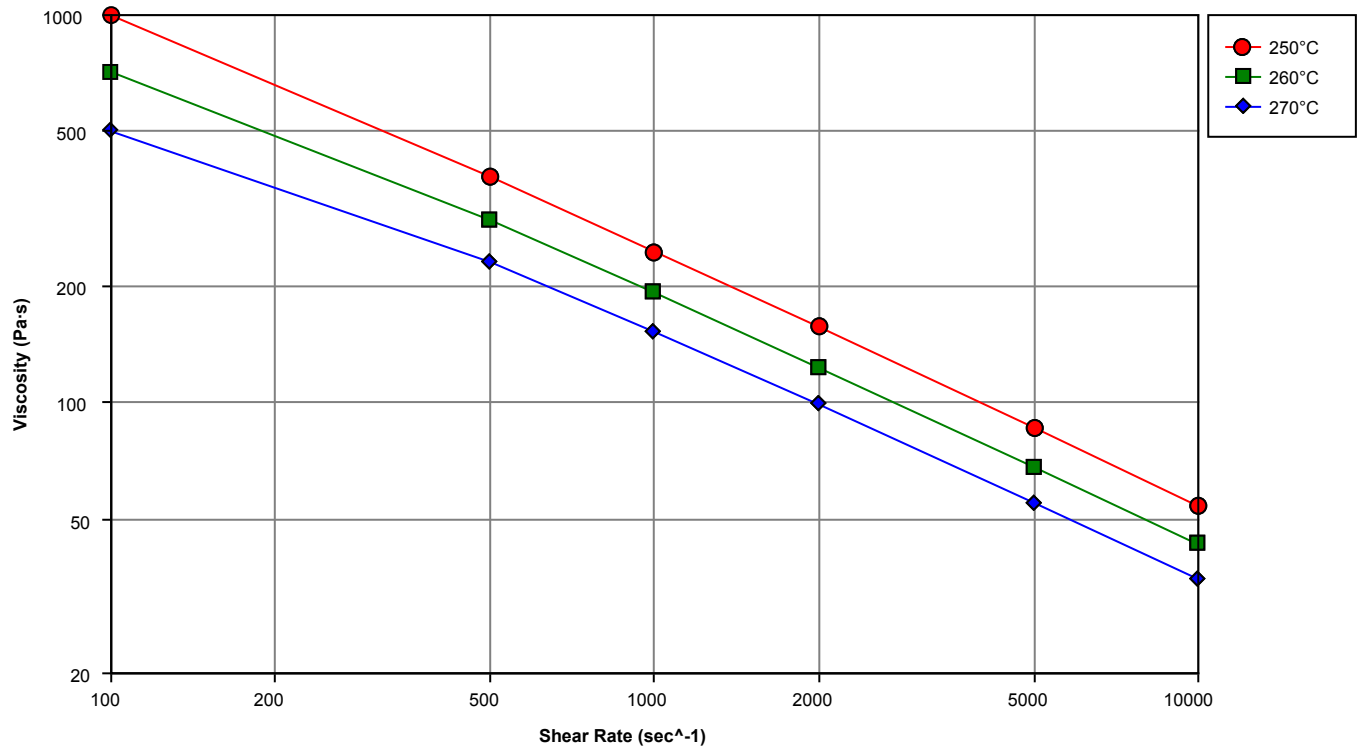
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Viscosity vs. Shear Rate (ISO 11403-2)



Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min

³ 20 sec

Contact DuPont for Material Safety Data Sheet, general guides and/or additional information about ventilation, handling, purging, drying, etc.

ISO Mechanical properties measured at 4.0mm, ISO Electrical properties measured at 2.0mm, and all ASTM properties measured at 3.2mm.

Test temperatures are 23°C unless otherwise stated.

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