# DuPont™ Crastin® PBT

**thermoplastic polyester resin**

## Crastin® T805 NC010

Crastin® T805 NC010 is a 30% glass fiber reinforced polybutylene terephthalate resin for injection molding. It has improved impact resistance and good processing characteristics.

| Property | Test Method | Units | Value |
|---|---|---|---|
| **Identification** | | | |
| Resin Identification | ISO 1043 | | PBTC-GF30 |
| Part Marking Code | ISO 11469 | | >PBTC-GF30< |
| **Mechanical** | | | |
| Stress at Break | ISO 527 | MPa (kpsi) | 112 (16.2) |
| Strain at Break | ISO 527 | % | 4 |
| Tensile Modulus | ISO 527 | MPa (kpsi) | 7300 (1100) |
| Tensile Creep Modulus | ISO 899 | MPa (kpsi) | |
| 1h | | | 6200 (900) |
| 1000h | | | 4000 (580) |
| Flexural Strength | ISO 178 | MPa (kpsi) | 175 (25.0) |
| Notched Charpy Impact Strength | ISO 179/1eA | $kJ/m^2$ | |
| -30°C (-22°F) | | | 13 |
| 23°C (73°F) | | | 14 |
| Unnotched Charpy Impact Strength | ISO 179/1eU | $kJ/m^2$ | |
| -30°C (-22°F) | | | 90 |
| 23°C (73°F) | | | 75 |

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.



050423/050425

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|---|---|---|---|
| **Thermal** | | | |
| Deflection Temperature | ISO 75f | °C (°F) | |
| 0.45MPa | | | 205 (401) |
| 1.80MPa | | | 185 (365) |
| Melting Temperature | ISO 11357-1/-3 | °C (°F) | |
| 10°C/min | | | 205 (400) |
| CLTE, Normal | ISO 11359-1/-2 | E-4/C (E-4/F) | |
| 23 - 55°C (73 - 130°F) | | | 1.2 (0.65) |
| CLTE, Parallel | ISO 11359-1/-2 | E-4/C (E-4/F) | |
| 23 - 55°C (73 - 130°F) | | | 0.3 (0.15) |
| Thermal Conductivity | DIN 51046 | W/m K (Btu in/h $ft^2$ F) | 0.3 (1.2) |
| Vicat Softening Temperature | ISO 306 | °C (°F) | |
| 10N, 50°C/h | | | 205 (400) |
| 50N, 50°C/h | | | 190 (375) |
| **Electrical** | | | |
| Surface Resistivity | IEC 60093 | ohm | >1E14 |
| Relative Permittivity | IEC 60250 | | |
| 1E2 Hz | | | 4.4 |
| 1E6 Hz | | | 4 |
| 50Hz, 1.0mm | | | 4.4 |
| Volume Resistivity | IEC 60093 | ohm m | >1E13 |
| Dissipation Factor | IEC 60250 | E-4 | |
| 1E2 Hz | | | 95 |
| 1E6 Hz | | | 215 |
| 50Hz, 1.0mm | | | 95 |
| Electric Strength | IEC 60243-1 | kV/mm (V/mil) | |
| 1.0mm | | | 29 (735) |
| 20s, Plate 2mm | | | 17 (430) |
| Electrolytical Corrosion | IEC 60426 | | |
| Plate 4mm | | | A1 |
| CTI | UL 746A | V | |
| 3.0mm | | | 440 |

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|---|---|---|---|
| **Flammability** | | | |
| Flammability Classification | IEC 60695-11-10 | | |
| 0.75mm | | | HB |
| Flammability Classification | UL94 | | |
| 0.75mm | | | HB |
| Oxygen Index | ISO 4589-1/-2 | % | 19 |
| Glow Wire Flammability Index | IEC 60695-2-1 | °C | |
| 3.0mm | | | 750 |
| **Temperature Index** | | | |
| RTI, Electrical | UL 746B | °C | |
| 0.75mm | | | 130 |
| 1.5mm | | | 140 |
| RTI, Impact | UL 746B | °C | |
| 0.75mm | | | 130 |
| RTI, Strength | UL 746B | °C | |
| 0.75mm | | | 130 |
| 1.5mm | | | 140 |
| **Other** | | | |
| Density | ISO 1183 | $kg/m^3$ ($g/cm^3$) | 1510 (1.51) |
| Ball Indention Hardness | ISO 2039-1 | MPa (kpsi) | |
| H 358/30 | | | 150 (22) |
| Water Absorption | ISO 62, Similar to | % | |
| Equilibrium 50%RH | | | 0.15 |
| Saturation, immersed | | | 0.35 |
| Molding Shrinkage | ISO 294-4 | % | |
| Normal, 2.0mm | | | 0.9 |
| Parallel, 2.0mm | | | 0.3 |

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| **Processing** | | | |
| Melt Temperature Range | | °C (°F) | 240-260 (465-500) |
| Melt Temperature Optimum | | °C (°F) | 250 (480) |
| Mold Temperature Range | | °C (°F) | 30-130 (85-265) |
| Mold Temperature Optimum | | °C (°F) | 80 (175) |
| Drying Time, Dehumidified Dryer | | h | 2-4 |
| Drying Temperature | | °C (°F) | 110-130 (230-265) |
| Processing Moisture Content | | % | <0.04 |
| Snake Flow | | mm | |
| 100MPa, 7 x 2mm | | | 425 |
| 90MPa, 5x0.30mm | | | 12 |
| 90MPa, 5x0.50mm | | | 42 |
| 90MPa, 5x0.75mm | | | 80 |
| 90MPa, 5x1.00mm | | | 124 |

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