

DuPont™ Delrin®

acetal resin

Delrin® 900P NC010

Delrin® 900P NC010 is a low viscosity acetal homopolymer resin for multicavity and thin wall molding. It offers an improved processing thermal stability.

| Property | Test Method | Units | Value |
|----------------------------------|-------------|-------------------|------------|
| Identification | | | |
| Resin Identification | ISO 1043 | | POM |
| Part Marking Code | ISO 11469 | | >POM< |
| Mechanical | | | |
| Yield Stress | ISO 527 | MPa (kpsi) | 71 (10.3) |
| Yield Strain | ISO 527 | % | 13 |
| Strain at Break | ISO 527 | % | |
| 50mm/min | | | 28 |
| Nominal Strain at Break | ISO 527 | % | 23 |
| Tensile Modulus | ISO 527 | MPa (kpsi) | 3300 (479) |
| Tensile Creep Modulus | ISO 899 | MPa (kpsi) | |
| 1h | | | 2800 (406) |
| 1000h | | | 1500 (218) |
| Flexural Modulus | ISO 178 | MPa (kpsi) | 3000 (435) |
| Notched Charpy Impact Strength | ISO 179/1eA | kJ/m ² | |
| -30°C (-22°F) | | | 7 |
| 23°C (73°F) | | | 8 |
| Unnotched Charpy Impact Strength | ISO 179/1eU | kJ/m ² | |
| -30°C (-22°F) | | | 200 |
| 23°C (73°F) | | | 200 |

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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| Thermal | | | |
| Deflection Temperature 0.45MPa | ISO 75-1/-2 | °C (°F) | 162 (324) |
| 1.80MPa | | | 94 (201) |
| Melting Temperature 10°C/min | ISO 11357-1/-3 | °C (°F) | 178 (352) |
| CLTE, Parallel 23 - 55°C (73 - 130°F) | ISO 11359-1/-2 | E-4/C (E-4/F) | 1.2 (0.67) |
| CLTE, Normal 23 - 55°C (73 - 130°F) | ISO 11359-1/-2 | E-4/C (E-4/F) | 1.2 (0.67) |
| Vicat Softening Temperature 50N | ISO 306 | °C (°F) | 160 (320) |
| Rheological | | | |
| Melt Mass-Flow Rate 190°C, 2.16kg | ISO 1133 | g/10 min | 25 |
| Electrical | | | |
| Surface Resistivity | IEC 60093 | ohm | >1E15 |
| Volume Resistivity | IEC 60093 | ohm m | 1E12 |
| Electric Strength 1.0mm | IEC 60243-1 | kV/mm (V/mil) | 32 (812) |
| Relative Permittivity 1E2 Hz | IEC 60250 | | 3.8 |
| 1E6 Hz | | | 3.8 |
| Dissipation Factor 1E2 Hz | IEC 60250 | E-4 | 180 |
| 1E6 Hz | | | 50 |
| CTI | IEC 60112 | V | 600 |

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| Flammability | | | |
| Flammability Classification 0.75mm | IEC 60695-11-10 | | HB |
| Flammability Classification 0.75mm | UL94 | | HB |
| Oxygen Index | ISO 4589-1/-2 | % | 23 |
| High Amperage Arc Ignition Resistance 0.75mm | UL 746A | arcs | 200 |
| Hot Wire Ignition 0.75mm | UL 746A | s | 8 |
| 1.5mm | | | 13 |
| 3.0mm | | | 22 |
| Temperature Index | | | |
| RTI, Electrical 0.75mm | UL 746B | °C | 50 |
| 1.5mm | | | 110 |
| 3.0mm | | | 110 |
| RTI, Impact 0.75mm | UL 746B | °C | 50 |
| 1.5mm | | | 85 |
| 3.0mm | | | 90 |
| RTI, Strength 0.75mm | UL 746B | °C | 50 |
| 1.5mm | | | 90 |
| 3.0mm | | | 95 |

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| Other | | | |
| Density | ISO 1183 | kg/m ³ (g/cm ³) | 1420 (1.42) |
| Hardness, Rockwell | ISO 2039/2 | | |
| Scale M | | | 92 |
| Scale R | | | 120 |
| Water Absorption | ISO 62, Similar to | % | |
| Equilibrium 50%RH | | | 0.26 |
| Immersion 24h | | | 0.56 |
| Saturation, immersed | | | 1.40 |
| Molding Shrinkage | ISO 294-4 | % | |
| Normal, 2.0mm | | | 1.9 |
| Parallel, 2.0mm | | | 1.9 |
| Processing | | | |
| Melt Temperature Range | | °C (°F) | 210-220 (410-430) |
| Melt Temperature Optimum | | °C (°F) | 215 (420) |
| Mold Temperature Range | | °C (°F) | 80-100 (175-210) |
| Mold Temperature Optimum | | °C (°F) | 90 (195) |
| Drying Time, Dehumidified Dryer | | h | 2-4 |
| Drying Temperature | | °C (°F) | 80 (175) |
| Processing Moisture Content | | % | <0.2 |
| Hold Pressure Range | | MPa (kpsi) | 80-100 (12-15) |

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