# DELRIN 300CPE NC010

**Delrin USA, LLC** - ***Acetal (POM) Homopolymer***

## General Information

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Additive | • Mold Release | | |
| Features | • Good Mold Release<br>• Good Processability<br>• Good Processability | • Good Strength<br>• Good Thermal Stability<br>• Good Toughness | • Homopolymer<br>• Low VOC<br>• Medium-high Viscosity |
| RoHS Compliance | • Contact Manufacturer | | |
| Part Marking Code (ISO 11469) | • >POM< | | |
| Resin ID (ISO 1043) | • POM | | |

## Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density | 1.42 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 7.0 | g/10 min | ISO 1133 |
| Melt Volume-Flow Rate (MVR) (190°C/2.16 kg) | 6.0 | cm³/10min | ISO 1133 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow | 1.8 | % | |
| Flow | 2.1 | % | |
| Water Absorption (Saturation, 73°F, 0.0787 in) | 0.90 | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH) | 0.20 | % | ISO 62 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 450000 | psi | ISO 527-1 |
| Tensile Stress (Yield) | 10300 | psi | ISO 527-2 |
| Tensile Strain (Yield) | 25 | % | ISO 527-2 |
| Nominal Tensile Strain at Break | 40 | % | ISO 527-2 |
| Poisson's Ratio | 0.37 | | |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -22°F | 4.8 | ft·lb/in² | |
| 73°F | 5.0 | ft·lb/in² | |
| Charpy Unnotched Impact Strength | | | ISO 179/1eU |
| -22°F | 180 | ft·lb/in² | |
| 73°F | No Break | | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (66 psi, Unannealed) | 329 | °F | ISO 75-2/B |
| Deflection Temperature Under Load (264 psi, Unannealed) | 207 | °F | ISO 75-2/A |
| Melting Temperature [2] | 352 | °F | ISO 11357-3 |
| CLTE - Flow | 6.1E-5 | in/in/°F | ISO 11359-2 |
| CLTE - Transverse | 6.1E-5 | in/in/°F | ISO 11359-2 |
| Thermal Conductivity | 2.8 | Btu·in/hr/ft²/°F | ISO 22007-2 |
| Annealing Temperature | 320 | °F | |
| Annealing Time - Optional | 30.0 | min/mm | |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Surface Resistivity | > 1.0E+15 | ohms | IEC 62631-3-2 |
| Volume Resistivity | > 1.0E+13 | ohms·m | IEC 62631-3-1 |

| | | | |
|---|---|---|---|
| Relative Permittivity | | | IEC 62631-2-1 |
| 100 Hz | 3.80 | | |
| 1 MHz | 3.50 | | |
| Dissipation Factor (1 MHz) | 5.6E-3 | | IEC 62631-2-1 |
| Comparative Tracking Index | 600 | V | IEC 60112 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Burning Rate [3] (0.0394 in) | 0.94 | in/min | ISO 3795 |
| Flame Rating | | | UL 94 |
| 0.031 in | HB | | |
| 0.06 in | HB | | |
| Flammability Classification | | | IEC 60695-11-10, -20 |
| 0.03 in | HB | | |
| 0.06 in | HB | | |
| FMVSS Flammability | B | | FMVSS 302 |
| **Fill Analysis** | **Nominal Value** | **Unit** | **Test Method** |
| Melt Density | 1.16 | g/cm³ | |
| Ejection Temperature | 275 | °F | |
| **Additional Information** | **Nominal Value** | **Unit** | **Test Method** |
| Emission | < 2 | ppm | VDA 275 |

## Processing Information

| **Injection** | **Nominal Value** | **Unit** |
|---|---|---|
| Drying Temperature | 176 | °F |
| Drying Time - Desiccant Dryer | 2.0 to 4.0 | hr |
| Suggested Max Moisture | < 0.20 | % |
| Processing (Melt) Temp | 392 to 419 | °F |
| Melt Temperature, Optimum | 401 | °F |
| Mold Temperature | 176 to 212 | °F |
| Mold Temperature, Optimum | 194 | °F |
| Holding Pressure | 11600 to 14500 | psi |
| Drying Recommended | yes | |
| Hold Pressure Time | 8.00 | s/mm |
| Maximum Screw Tangential Speed | 472 | in/min |

## Notes

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

[2] 10°C/min

[3] FMVSS 302