# DELRIN 525GR NC000

**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 |
| Filler / Reinforcement | • Glass Fiber, 25% Filler by Weight | | |
| Additive | • Mold Release | | |
| Features | • Creep Resistant<br>• Good Mold Release | • High Stiffness<br>• High Strength | • Homopolymer |
| RoHS Compliance | • Contact Manufacturer | | |
| Part Marking Code (ISO 11469) | • >POM-GF25< | | |
| Resin ID (ISO 1043) | • POM-GF25 | | |

## Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density | 1.59 | g/cm³ | ISO 1183 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 8.0 | g/10 min | ISO 1133 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow | 1.2 | % | |
| Flow | 0.40 | % | |
| Water Absorption (Saturation, 73°F, 0.0787 in) | 1.3 | % | ISO 62 |
| Water Absorption (Equilibrium, 73°F, 0.0787 in, 50% RH) | 0.17 | % | ISO 62 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 1.38E+6 | psi | ISO 527-1 |
| Tensile Stress (Break) | 23200 | psi | ISO 527-2 |
| Tensile Strain (Break) | 3.0 | % | ISO 527-2 |
| Tensile Creep Modulus (1 hr) | 1.23E+6 | psi | ISO 899-1 |
| Tensile Creep Modulus (1000 hr) | 870000 | psi | ISO 899-1 |
| Flexural Modulus | 1.33E+6 | psi | ISO 178 |
| Flexural Stress [2] | 35500 | psi | ISO 178 |
| Compressive Stress | 30500 | psi | ISO 604 |
| Poisson's Ratio | 0.34 | | |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -22°F | 4.8 | ft·lb/in² | |
| 73°F | 4.8 | ft·lb/in² | |
| Charpy Unnotched Impact Strength | | | ISO 179/1eU |
| -22°F | 24 | ft·lb/in² | |
| 73°F | 29 | ft·lb/in² | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness | | | ISO 2039-2 |
| M-Scale | 101 | | |
| R-Scale | 122 | | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (66 psi, Unannealed) | 349 | °F | ISO 75-2/B |
| Deflection Temperature Under Load (264 psi, Unannealed) | 342 | °F | ISO 75-2/A |
| Melting Temperature [3] | 352 | °F | ISO 11357-3 |
| CLTE - Flow | 1.9E-5 | in/in/°F | ISO 11359-2 |

| | | | |
|---|---|---|---|
| CLTE - Transverse | 5.6E-5 | in/in/°F | ISO 11359-2 |
| Thermal Conductivity | 3.2 | Btu·in/hr/ft²/°F | ISO 22007-2 |
| RTI Elec | | | UL 746B |
| 0.030 in | 122 | °F | |
| 0.06 in | 122 | °F | |
| 0.12 in | 122 | °F | |
| RTI Imp | | | UL 746B |
| 0.030 in | 122 | °F | |
| 0.06 in | 122 | °F | |
| 0.12 in | 122 | °F | |
| RTI Str | | | UL 746B |
| 0.030 in | 122 | °F | |
| 0.06 in | 122 | °F | |
| 0.12 in | 122 | °F | |
| Annealing Temperature | 320 | °F | |
| Annealing Time - Optional | 30.0 | min/mm | |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Volume Resistivity | 1.0E+12 | ohms·m | IEC 62631-3-1 |
| Relative Permittivity | | | IEC 62631-2-1 |
| 100 Hz | 3.70 | | |
| 1 MHz | 3.80 | | |
| Comparative Tracking Index | 600 | V | IEC 60112 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Burning Rate [4] (0.0394 in) | 1.9 | in/min | ISO 3795 |
| Flame Rating | | | UL 94 |
| 0.030 in | HB | | |
| 0.06 in | HB | | |
| Flammability Classification | | | IEC 60695-11-10, -20 |
| 0.030 in | HB | | |
| 0.06 in | HB | | |
| FMVSS Flammability | B | | FMVSS 302 |
| **Additional Information** | **Nominal Value** | **Unit** | **Test Method** |
| Fogging | | | ISO 6452 |
| F-value (refraction) [5] | 90 | % | |
| G-value (condensate) | 1.2 | mg | |

## 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 | 410 to 428 | °F |
| Melt Temperature, Optimum | 419 | °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 | 709 | in/min |

## Notes

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

[2] Strain at break = 3.2%

[3] 10°C/min

[4] FMVSS 302

[5] Derived from Similar Grade, Assessed (Min)