# DELRIN 527UV BK701

**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 | • UV Stabilizer | |
| Features | • Good Mold Release<br>• Homopolymer | • Medium Viscosity<br>• UV Stabilized | |
| Uses | • Automotive Applications | | |
| RoHS Compliance | • Contact Manufacturer | | |
| Automotive Specifications | • FORD WSK-M4D744-A2 | • STELLANTIS MS-DB-100 CPN1428 | |
| 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) | 15 | g/10 min | ISO 1133 |
| Melt Volume-Flow Rate (MVR) (190°C/2.16 kg) | 12 | cm³/10min | ISO 1133 |
| Molding Shrinkage | | | ISO 294-4 |
| Across Flow | 1.8 | % | |
| Flow | 1.9 | % | |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 464000 | psi | ISO 527-1 |
| Tensile Stress (Yield) | 10300 | psi | ISO 527-2 |
| Tensile Strain (Yield) | 14 | % | ISO 527-2 |
| Nominal Tensile Strain at Break | 27 | % | ISO 527-2 |
| Flexural Modulus | 435000 | psi | ISO 178 |
| Flexural Stress (3.5% Strain) | 11800 | psi | ISO 178 |
| Poisson's Ratio | 0.37 | | |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -22°F | 3.3 | ft·lb/in² | |
| 73°F | 3.8 | ft·lb/in² | |
| Charpy Unnotched Impact Strength (73°F) | 110 | ft·lb/in² | ISO 179/1eU |
| Notched Izod Impact Strength (73°F) | 3.3 | ft·lb/in² | ISO 180/1A |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness | | | ISO 2039-2 |
| M-Scale | 90 | | |
| R-Scale | 120 | | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load (66 psi, Unannealed) | 325 | °F | ISO 75-2/B |
| Deflection Temperature Under Load (264 psi, Unannealed) | 198 | °F | ISO 75-2/A |
| Vicat Softening Temperature | 345 | °F | ISO 306/A50 |
| 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 |

| | | | |
|---|---|---|---|
| RTI Elec (0.030 in) | 122 | °F | UL 746B |
| RTI Imp (0.030 in) | 122 | °F | UL 746B |
| RTI Str (0.030 in) | 122 | °F | UL 746B |
| Annealing Temperature | 320 | °F | |
| Annealing Time - Optional | 30.0 | min/mm | |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Burning Rate [3] (0.0394 in) | 1.1 | in/min | ISO 3795 |
| Flame Rating (0.031 in) | HB | | UL 94 |
| Flammability Classification (0.03 in) | HB | | IEC 60695-11-10, -20 |
| FMVSS Flammability | B | | FMVSS 302 |
| **Fill Analysis** | **Nominal Value** | **Unit** | **Test Method** |
| Melt Density | 1.16 | g/cm³ | |
| **Additional Information** | **Nominal Value** | **Unit** | **Test Method** |
| Emission | < 8 | ppm | VDA 275 |
| Fogging | | | ISO 6452 |
| F-value (refraction) | 80 | % | |
| G-value (condensate) | 0.20 | mg | |
| Weather Stability | | | |
| delta E | 0.600 | | DIN 53236 |
| grey scale | 4.00 to 5.00 | | ISO 105-A02 |

## 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] 10°C/min

[3] FMVSS 302