# Celanex® 2002-3

## Celanese Corporation - Polybutylene Terephthalate

Monday, November 4, 2019

### General Information

**Product Description**

Celanex 2002-3 is a general purpose, unreinforced polybutylene terephthalate with a good balance of mechanical properties and processability. Celanex 2002-3 is a medium flow material that contains an internal lubricant.

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Europe | • North America | |
| Additive | • Lubricant | | |
| Features | • General Purpose<br>• Good Processability | • Lubricated<br>• Medium Flow | |
| Uses | • General Purpose | | |
| RoHS Compliance | • Contact Manufacturer | | |
| Automotive Specifications | • CHRYSLER MS-DB-400 CPN4175 Color: 100% Color Match | • GM GMP.PBT.001 Color: Black | • GM GMP.PBT.001 Color: Natural |

### ASTM & ISO Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density | 1.31 | g/cm³ | ISO 1183 |
| Melt Volume-Flow Rate (MVR) (250°C/2.16 kg) | 20 | cm³/10min | ISO 1133 |
| Water Absorption (Equilibrium, 73°F, 50% RH) | 0.25 | % | ISO 62 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 363000 | psi | ISO 527-2/1A/1 |
| Tensile Stress (Yield) | 8700 | psi | ISO 527-2/1A/50 |
| Tensile Strain (Yield) | 4.0 | % | ISO 527-2/1A/50 |
| Tensile Strain (Break) | > 50 | % | ISO 527-2/1A/50 |
| Flexural Modulus (73°F) | 363000 | psi | ISO 178 |
| Flexural Stress (73°F) | 11600 | psi | ISO 178 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179/1eA |
| -22°F | 2.9 | ft·lb/in² | |
| 73°F | 2.9 | ft·lb/in² | |
| Charpy Unnotched Impact Strength | | | ISO 179/1eU |
| -22°F | 90 | ft·lb/in² | |
| 73°F | No Break | | |
| Notched Izod Impact Strength | | | ISO 180/1A |
| -22°F | 2.6 | ft·lb/in² | |
| 73°F | 2.6 | ft·lb/in² | |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Heat Deflection Temperature (66 psi, Unannealed) | 302 | °F | ISO 75-2/B |
| Heat Deflection Temperature (264 psi, Unannealed) | 131 | °F | ISO 75-2/A |
| Vicat Softening Temperature | 374 | °F | ISO 306/B50 |
| CLTE - Flow | 7.2E-5 | in/in/°F | ISO 11359-2 |
| CLTE - Transverse | 6.7E-5 | in/in/°F | ISO 11359-2 |

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| Processing Information | | |
|---|---|---|
| **Injection** | **Nominal Value** | **Unit** |
| Drying Temperature | 248 to 266 | °F |
| Drying Time | 4.0 | hr |
| Suggested Max Moisture | 0.020 | % |
| Hopper Temperature | 68 to 122 | °F |
| Rear Temperature | 446 to 464 | °F |
| Middle Temperature | 455 to 482 | °F |
| Front Temperature | 455 to 482 | °F |
| Nozzle Temperature | 482 to 500 | °F |
| Processing (Melt) Temp | 455 to 500 | °F |
| Mold Temperature | 149 to 199 | °F |
| Injection Rate | Moderate-Fast | |

**Injection Notes**

Manifold Temperature: 250 to 260°C
Zone 4 Temperature: 240 to 260°C
Feed Temperature: 230 to 240°C

### Notes

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