# Celstran® PPS-CF40-01

## Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

## General Information

**Product Description**

Celstran PPS-CF 40-01 is a 40% long carbon fiber Polyphenylene Sulfide. This material imparts excellent impact and extremely high modulus properties that exceed that of short carbon fiber PPS.

**General**

| | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Asia Pacific | • Europe | • North America |
| Filler / Reinforcement | • Long Carbon Fiber, 40% Filler by Weight | | |
| Features | • Good Impact Resistance | • High Stiffness | |
| RoHS Compliance | • Contact Manufacturer | | |

## ASTM & ISO Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density | 1.49 | g/cm³ | ISO 1183 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 5.41E+6 | psi | ISO 527-2/1A |
| Tensile Stress (Break) | 26800 | psi | ISO 527-2/1A/5 |
| Tensile Strain (Break) | 0.57 | % | ISO 527-2/1A/5 |
| Flexural Modulus (73°F) | 5.06E+6 | psi | ISO 178 |
| Flexural Stress (73°F) | 49700 | psi | ISO 178 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength (73°F) | 7.9 | ft·lb/in² | ISO 179/1eA |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| CLTE - Flow | 1.3E-4 | in/in/°F | ISO 11359-2 |
| CLTE - Transverse | 1.5E-3 | in/in/°F | ISO 11359-2 |

## Processing Information

| Injection | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 248 to 284 | °F |
| Drying Time | 3.0 to 4.0 | hr |
| Suggested Max Moisture | 0.020 | % |
| Hopper Temperature | 158 to 176 | °F |
| Rear Temperature | 563 to 581 | °F |
| Middle Temperature | 599 to 653 | °F |
| Front Temperature | 599 to 653 | °F |
| Nozzle Temperature | 599 to 653 | °F |
| Processing (Melt) Temp | 599 to 635 | °F |
| Mold Temperature | 284 to 320 | °F |
| Injection Rate | Moderate | |
| Back Pressure | < 435 | psi |

**Injection Notes**

Feeding zone temperature: 20 to 50°C
Zone4 temperature: 315 to 345°C
Hot runner temperature: 305 to 315°C

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### Notes

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