



Celstran® CFR-TP PPS GF60-01

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

Product Description

Celstran® CFR-TP PPS GF60-01 is a 60% E-glass by weight PPS (polyphenylene sulfide) continuous fiber (uni-directional) reinforced thermoplastic composite tape. This material exhibits a high strength-to-weight ratio, excellent chemical and flame, smoke, and toxicity or (FST) performance, and long-term heat stability. It is well suited for aerospace, oil/gas and industrial applications where demanding chemical and FST performance is necessary. The E-glass fiber offers a lower cost solution as compared to other PPS materials reinforced with S-glass. This material is available in natural and black colors. Alternate tape widths and thicknesses may be available.

General

| | | | |
|------------------------|---|---------------------------|------------------|
| Material Status | • Experimental: Active | | |
| Availability | • Africa & Middle East | • Europe | • North America |
| Filler / Reinforcement | • Asia Pacific • Glass Fiber, 60% Filler by Weight, 44% Filler by Volume | | |
| Features | • Chemical Resistant | • Heat Aging Resistant | • High Strength |
| Uses | • Aerospace Applications | • Industrial Applications | • Sporting Goods |
| Forms | • Unidirectional Prepreg | | |

ASTM & ISO Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|---|---------------|-------------------|-------------|
| Density | 1.89 | g/cm ³ | ISO 1183 |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus ² | 5.03E+6 | psi | ASTM D3039M |
| Tensile Strength ² | 113000 | psi | ASTM D3039M |
| Tensile Elongation ² (Break) | 2.4 | % | ASTM D3039M |
| Flexural Modulus ² | 5.44E+6 | psi | ASTM D790 |
| Flexural Strength ² | 126000 | psi | ASTM D790 |
| Flexural Elongation (Break) ² | 3.22 | | ASTM D790 |
| Thermal | Nominal Value | Unit | Test Method |
| Glass Transition Temperature ³ | 194 | °F | ISO 11357-2 |
| Melting Temperature ³ | 536 | °F | ISO 11357-3 |
| Additional Information | Nominal Value | Unit | |
| Fiber Areal Weight | 228.6 | lb/ream | |
| Tape Areal Weight | 381.0 | lb/ream | |
| Tape Thickness | 9.8 | mil | |
| Tape Width | 12 | in | |

Notes

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

² 0°, Tape

³ 10°C/min

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