# THORNEL® T-300 PAN-BASED FIBER

TECHNICAL DATA SHEET

## DESCRIPTION

THORNEL® T300 is a standard modulus fiber supplied with 1% UC.309 epoxy-compatible sizing. T300 1K, 6K and 12K products are offered in never-twisted form. T300 3K is offered in both twisted and never-twisted forms.

## CHARACTERISTICS

**Table 1 | THORNEL T300 Fiber Characteristics by Tow Count**

| Property | 1K[1] | 3K[1] | 6K[1] | 12K[1] |
|---|---|---|---|---|
| **Yield,** yd/lb (m/g) | 7500 (15.05) | 2510 (5.04) | 1255 (2.52) | 627 (1.26) |
| **Linear Density,** g/m | 0.066 | 0.198 | 0.398 | 0.792 |
| **Fiber Area in Yarn Cross Section,** $in^2 \times 10^3$ | 5.3 | 17.5 | 35.0 | 70.0 |

[1]K refers to 1,000s of filaments in a strand

## PROPERTIES

**Table 2 | Typical Properties of THORNEL T-300 PAN-Based Fiber[2]**

| Property | Value |
|---|---|
| **Tensile Strength,** ksi (GPa) | 545 (3.75) |
| **Tensile Modulus,** Msi (GPa) | 33.5 (231) |
| **Density,** $lb/in^3$ ($g/cm^3$) | 0.064 (1.76) |
| **Elongation at Break,** % | 1.6 |
| **Filament Diameter,** micron | 7.0 |
| **Carbon Assay,** % | 92 |
| **Surface Area,** $m^2/g$ | 0.45 |
| **Electrical Resistivity,** micro-ohm-m | 18.0 |
| **Thermal Conductivity,** BTU/hr-ft-°F (W/mK) | 5 (8) |
| **CTE at 70°F (21°C),** ppm/°F (ppm/°C) | -0.30 (-0.60) |

[2]Typical properties; actual properties of individual lots will vary within specification limits

## PRODUCT HANDLING AND SAFETY

Cytec Engineered Materials recommends wearing clean, impervious gloves when working with carbon fibers to reduce skin contact and to avoid contamination of the product.

Materials Safety Data Sheets (MSDS) and product labels are available upon request and can be obtained from any Cytec Engineered Materials Office.

## DISPOSAL OF SCRAP MATERIAL

Disposal of scrap material should be in accordance with local, state, and federal regulations.

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