THORNEL® T-650/35 PAN-BASED FIBER

TECHNICAL DATA SHEET

DESCRIPTION

THORNEL® T650 is a continuous, high strength, standard modulus carbon fiber with excellent oxidation resistance and composite performance. THORNEL T650/35 fiber is supplied with 1% UC.309 epoxy compatible sizing.

CHARACTERISTICS

Table 1 | THORNEL T650/35 Fiber Characteristics by Tow Count

Property	3K[1]	6K[1]	12K[1]
Yield, yd/lb (m/g)	2534 (5.08)	1271 (2.55)	650 (1.30)
Linear Density, g/m	0.196	0.395	0.777
Fiber Area in Yarn Cross Section, $in^2 \times 10^3$	17.2	34.4	66.9

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

PROPERTIES

Table 2 | Typical Properties of THORNEL T650/35 PAN-Based Fiber[2]

Property	Value
Tensile Strength, ksi (GPa)	620 (4.28)
Tensile Modulus, Msi (GPa)	37 (255)
Density, lb/in^3 (g/cm^3)	0.064 (1.77)
Elongation at Break, %	1.7
Filament Diameter, micron	6.8
Carbon Assay, %	94
Surface Area, m^2/g	0.5
Electrical Resistivity, micro-ohm-m	15
Thermal Conductivity, BTU/hr-ft-°F (W/mK)	8 (14)
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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