

T400H DATA SHEET

Enhanced tensile strength and modulus over T300 and T300J, specifically designed for aerospace applications.

FIBER PROPERTIES

		English	Metric	Test Method
Tensile Strength		640 ksi	4,410 MPa	TY-030B-01
Tensile Modulus		36.3 Msi	250 GPa	TY-030B-01
Strain		1.8 %	1.8 %	TY-030B-01
Density		0.065 lbs/in ³	1.80 g/cm ³	TY-030B-02
Filament Diameter		2.8E-04 in.	7 μm	
Yield	3K	7,523 ft/lbs	198 g/1000m	TY-030B-03
	6K	3,761 ft/lbs	396 g/1000m	TY-030B-03
Sizing Type	40A, 40B		1.0 %	TY-030B-05
& Amount	40D		0.7 %	TY-030B-05
	Twist	Twisted, Untwisted		

FUNCTIONAL PROPERTIES

CTE		-0.45 $\alpha \cdot 10^{-6}/^{\circ}\text{C}$
Specific Heat		0.18 Cal/g $\cdot^{\circ}\text{C}$
Thermal Conductivity		0.0252 Cal/cm $\cdot\text{s}\cdot^{\circ}\text{C}$
Electric Resistivity		1.6 x 10 ⁻³ Ω $\cdot\text{cm}$
Chemical Composition: Carbon		94 %
	Na + K	<50 ppm

COMPOSITE PROPERTIES *

Tensile Strength	330 ksi	2,250 MPa	ASTM D-3039
Tensile Modulus	21.5 Msi	145 GPa	ASTM D-3039
Tensile Strain	1.5 %	1.5 %	ASTM D-3039
Compressive Strength	225 ksi	1,570 MPa	ASTM D-695
Flexural Strength	--- ksi	--- MPa	ASTM D-790
Flexural Modulus	--- Msi	--- GPa	ASTM D-790
ILSS	14.0 ksi	10 kgf/mm ²	ASTM D-2344
90° Tensile Strength	9.5 ksi	65 MPa	ASTM D-3039

* Toray 250°F Epoxy Resin. Normalized to 60% fiber volume.

T400H

COMPOSITE PROPERTIES * *

Tensile Strength	330 ksi	2,250 MPa	ASTM D-3039
Tensile Modulus	20.5 Msi	140 GPa	ASTM D-3039
Tensile Strain	1.5 %	1.5 %	ASTM D-3039
Compressive Strength	230 ksi	1,570 MPa	ASTM D-695
Compressive Modulus	20.0 Msi	135 GPa	ASTM D-695
In-Plane Shear Strength	14 ksi	98 MPa	ASTM D-3518
ILSS	15.5 ksi	11 kgf/mm ²	ASTM D-2344
90° Tensile Strength	11.5 ksi	80 MPa	ASTM D-3039

** Toray Semi-Toughened 350°F Epoxy Resin. Normalized to 60% fiber volume.

See Section 4 for Safety & Handling information. The above properties do not constitute any warranty or guarantee of values.

These values are for material selection purposes only. For applications requiring guaranteed values, contact our sales and technical team to establish a material specification document.

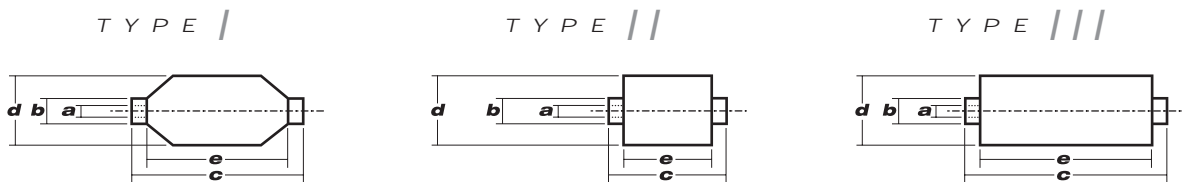
PACKAGING

The table below summarizes the tow sizes, twists, sizing types, and packaging available for standard material. Other bobbin sizes may be available on a limited basis.

Tow Sizes	Twist ¹	Sizing	Bobbin Net Weight (kg)	Bobbin Type ²	Bobbin Size (mm)					Spools per Case	Case Net Weight (kg)
					a	b	c	d	e		
3K	A	40A	2.0	//	76	82	192	157	156	12	24
	B	40B	2.0	//	76	82	192	157	156	12	24
6K	A, B	40D	2.0	//	76	82	192	157	156	12	24

¹ **Twist** A: Twisted yarn B: Untwisted yarn made from a twisted yarn through an untwisting process C: Never twisted yarn

² **Bobbin Type** See Diagram below



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