

T800H DATA SHEET

Intermediate modulus, high tensile strength fiber, with excellent balanced composite properties. Designed and developed to meet the weight saving demand of aircraft. Has been used in primary structure of aircraft, including vertical fin and horizontal stabilizer.

F I B E R P R O P E R T I E S

		<i>English</i>	<i>Metric</i>	<i>Test Method</i>
Tensile Strength		796 ksi	5,490 MPa	TY-030B-01
Tensile Modulus		42.7 Msi	294 GPa	TY-030B-01
Strain		1.9 %	1.9 %	TY-030B-01
Density		0.065 lbs/in ³	1.81 g/cm ³	TY-030B-02
Filament Diameter		2.0E-04 in.	5 μm	
Yield	6K	6,679 ft/lbs	223 g/1000m	TY-030B-03
	12K	3,347 ft/lbs	445 g/1000m	TY-030B-03
Sizing Type & Amount	40A, 40B		1.0 %	TY-030B-05
	50B		1.0 %	TY-030B-05
	Twist	Twisted, Untwisted		

F U N C T I O N A L P R O P E R T I E S

CTE	-0.56 α·10 ⁻⁶ /°C
Specific Heat	0.18 Cal/g·°C
Thermal Conductivity	0.0839 Cal/cm·s·°C
Electric Resistivity	1.4 x 10 ⁻³ Ω·cm
Chemical Composition: Carbon	96 %
	Na + K <50 ppm

C O M P O S I T E P R O P E R T I E S *

Tensile Strength	380 ksi	2,650 MPa	ASTM D-3039
Tensile Modulus	25.0 Msi	170 GPa	ASTM D-3039
Tensile Strain	1.5 %	1.5 %	ASTM D-3039
Compressive Strength	230 ksi	1,570 MPa	ASTM D-695
Flexural Strength	235 ksi	1,620 MPa	ASTM D-790
Flexural Modulus	22.0 Msi	150 GPa	ASTM D-790
ILSS	14.0 ksi	10 kgf/mm ²	ASTM D-2344
90° Tensile Strength	9.0 ksi	63 MPa	ASTM D-3039

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

T800H

COMPOSITE PROPERTIES **

Tensile Strength	415 ksi	2,840 MPa	ASTM D-3039
Tensile Modulus	23.5 Msi	160 GPa	ASTM D-3039
Tensile Strain	1.6 %	1.6 %	ASTM D-3039
Compressive Strength	230 ksi	1,570 MPa	ASTM D-695
Compressive Modulus	21.5 Msi	145 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.

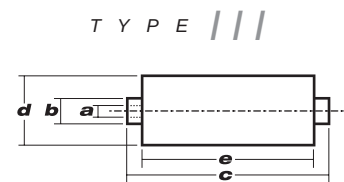
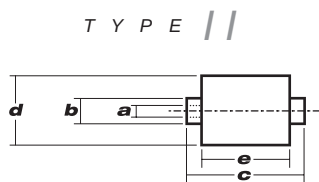
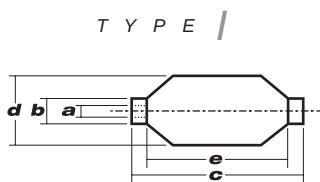
PACKAGING

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		
6K	B	40B	2.0	//	76	82	192	157	156	12	24
12K	A	40A	4.0	///	76.5	82.5	280	176	252	6	24
12K	B	40B, 50B	4.0	///	76.5	82.5	280	176	252	6	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



TORAY CARBON FIBERS AMERICA, INC.

6 Hutton Centre Drive, Suite #1270, Santa Ana, CA 92707 TEL: (714) 431-2320 FAX: (714) 424-0750

Sales@Toraycfa.com Technical@Toraycfa.com www.torayusa.com