

# T1000G DATA SHEET

Intermediate modulus, world's highest tensile strength fiber. Suitable for lightweight, tensile strength critical applications such as pressure vessels for aerospace.

## FIBER PROPERTIES

		English	Metric	Test Method
Tensile Strength		924 ksi	6,370 MPa	TY-030B-01
Tensile Modulus		42.7 Msi	294 GPa	TY-030B-01
Strain		2.2 %	2.2 %	TY-030B-01
Density		0.065 lbs/in <sup>3</sup>	1.80 g/cm <sup>3</sup>	TY-030B-02
Filament Diameter		2.0E-04 in.	5 μm	
Yield	12K	3,071 ft/lbs	485 g/1000m	TY-030B-03
Sizing Type & Amount	40D		0.7 %	TY-030B-05
	Twist	Untwisted		

## FUNCTIONAL PROPERTIES

CTE		-0.55 $\alpha \cdot 10^{-6}/^{\circ}\text{C}$
Specific Heat		0.18 Cal/g $\cdot^{\circ}\text{C}$
Thermal Conductivity		0.0765 Cal/cm $\cdot\text{s}\cdot^{\circ}\text{C}$
Electric Resistivity		1.4 x 10 <sup>-3</sup> Ω $\cdot\text{cm}$
Chemical Composition: Carbon		95 %
Na + K		<50 ppm

## COMPOSITE PROPERTIES \*

Tensile Strength	440 ksi	3,040 MPa	ASTM D-3039
Tensile Modulus	24.0 Msi	165 GPa	ASTM D-3039
Tensile Strain	1.7 %	1.7 %	ASTM D-3039
Compressive Strength	230 ksi	1,570 MPa	ASTM D-695
Flexural Strength	230 ksi	1,570 MPa	ASTM D-790
Flexural Modulus	21.5 Msi	145 GPa	ASTM D-790
ILSS	13.0 ksi	9 kgf/mm <sup>2</sup>	ASTM D-2344
90° Tensile Strength	8.5 ksi	60 MPa	ASTM D-3039

\* Toray 250°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.

# T1000G

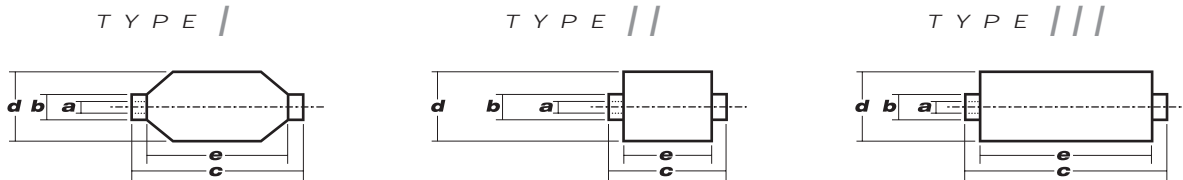
## PACKAGING

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 <sup>1</sup>	Sizing	Bobbin Net Weight (kg)	Bobbin Type <sup>2</sup>	Bobbin Size (mm)					Spools per Case	Case Net Weight (kg)
					a	b	c	d	e		
12K	B	40D	2.0	///	76.5	82.5	280	140	252	12	24

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

<sup>2</sup> **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