

# TORAYCA™ T800H Intermediate Modulus Carbon Fiber Data Sheet



Toray Composite Materials America, Inc.

## PRODUCT NOTES

Intermediate modulus, high tensile strength fiber, with excellent balanced composite properties. Designed and developed to meet the weight saving demand of aircraft. Excellent processability in traditional manufacturing methods (weaving, braiding, filament winding, prepreg, etc). Manufacturing locations include Japan and France.

## PRODUCT DESIGNATION

FIBER TYPE	TWIST	FILAMENT COUNT	SIZING TYPE	SUFACE TREATMENT	SIZING AMOUNT
T800H	B*	12,000	4	0	B

\* B: Untwisted

## FIBER PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength	796 Ksi	5,490 MPa	TY-030B-01
Tensile Modulus	42.7 Msi	294 GPa	TY-030B-01
Strain at Failure		1.9%	TY-030B-01
Density		1.81 g/cm <sup>3</sup>	TY-030B-02
Filament Diameter		5 μm	
Yield	6K	223 g/1000m	TY-030B-03
	12K	445 g/1000m	TY-030B-03

## FUNCTIONAL PROPERTIES

PROPERTY	VALUE
CTE	-0.56 α · 10 <sup>-6</sup> /°C
Specific Heat	0.752 J/g · °C
Thermal Conductivity	0.10 J/cm · s·°C
Electric Resistivity	1.4 x 10 <sup>-3</sup> Ω·cm
Chemical Composition: Carbon	>96%
Na + K	<50 ppm

## RESIN SYSTEM COMPATIBILITY

SIZING TYPE & AMOUNT	RESIN SYSTEM COMPATIBILITY	METHOD
40B (1.0%)	Epoxy	TY-030B-05
50B (1.0%)	Epoxy, phenolic, polyester, vinyl ester	TY-030B-05

## COMPOSITE PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength*	424 Ksi	2,920 MPa	ASTM D3039
Tensile Modulus*	24 Msi	168 GPa	ASTM D3039
Tensile Strain		1.67%	ASTM D3039
Compressive Strength*	225 Ksi	1,550 MPa	SACMASRM1R-94
Flexural Strength*	248 Ksi	1,710 MPa	ASTM D790
Flexural Modulus*	21 Msi	147 GPa	ASTM D790
ILSS	13 Ksi	88.5 MPa	SACMASRM8R-94
In Plain Shear Strength	24 Ksi	164 MPa	ASTM D3518
90° Tensile Strength	12 Ksi	97 MPa	ASTM D3039

\* Normalized to 60% fiber volume. Cured with #2592 epoxy at 130 °C.

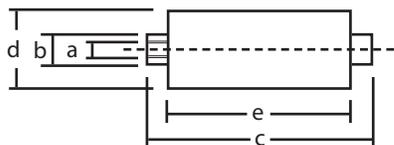
## PACKAGING

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.

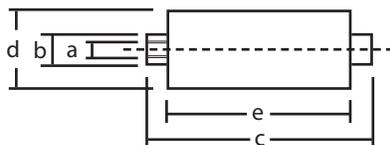
TOW SIZES	BOBBIN NET WEIGHT (kg)	BOBBIN TYPE	BOBBIN SIZE (mm)					SPOOL PER CASE	CASE NET WEIGHT (kg)
			a	b	c	d	e		
6K	2.0	II	76	82	192	157	156	12	24
12K	4.0	III	76.5	82.5	280	166	252	6	24

### Bobbin Type:

Type II



Type III



*Please refer to SDS for handling and disposal.*

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