

TORAYCA™ T300 Standard Modulus Carbon Fiber Data Sheet



Toray Composite Materials America, Inc.

PRODUCT NOTES

Baseline carbon fiber with a 40-year production history and is known for its balanced composite properties, high quality, consistency, reliability and suppliability. 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
T300	B*	3,000	4	0	B

* B: Untwisted

FIBER PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength	512 Ksi	3,530 MPa	TY-030B-01
Tensile Modulus	33.4 Msi	230 GPa	TY-030B-01
Strain at Failure		1.5%	TY-030B-01
Density		1.76 g/cm ³	TY-030B-02
Filament Diameter		7 μm	
Yield	1K	66 g/1000m	TY-030B-03
	3K	198 g/1000m	TY-030B-03
	6K	396 g/1000m	TY-030B-03

FUNCTIONAL PROPERTIES

PROPERTY	VALUE
CTE	-0.41 α · 10 ⁻⁶ /°C
Specific Heat	0.777 J/g · °C
Thermal Conductivity	0.105 J/cm · s·°C
Electric Resistivity	1.7 x 10 ⁻³ Ω·cm
Chemical Composition: Carbon	>93%
Na + K	<50 ppm

RESIN SYSTEM COMPATIBILITY

SIZING TYPE & AMOUNT	RESIN SYSTEM COMPATIBILITY	METHOD
40A/B (1.0%)	Epoxy	TY-030B-05
40D (0.7%)	Epoxy	TY-030B-05
50A/B (1.0%)	Epoxy, phenolic, polyester, vinyl ester	TY-030B-05

COMPOSITE PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength*	264 Ksi	1,820 MPa	ASTM D3039
Tensile Modulus*	20 Msi	140 GPa	ASTM D3039
Tensile Strain		1.26%	ASTM D3039
Compressive Strength*	213 Ksi	1,470 MPa	SACMASRM1R-94
Flexural Strength*	260 Ksi	1,790 MPa	ASTM D790
Flexural Modulus*	18 Msi	123 GPa	ASTM D790
ILSS	14 Ksi	94.1 MPa	SACMASRM8R-94
In Plain Shear Strength	14 Ksi	95 MPa	ASTM D3518
90° Tensile Strength	11 Ksi	76 MPa	ASTM D3039

* Normalized to 60% fiber volume. Cured with #2500 epoxy at 130 °C.

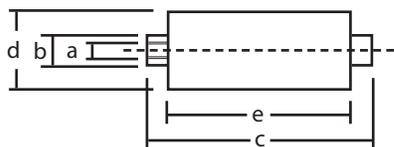
PACKAGING

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		
1K	1.0	II	76	82	192	132	156	20	20
3K	2.0	II	76	82	192	157	156	12	24
6K									

Bobbin Type:

Type II



Please refer to SDS for handling and disposal.

The data listed herein are lot averages, for reference purposes only, and are offered AS-IS without warranty. The results are not intended for specification purposes. WARNING: This document may contain technical data whose export is restricted by the Export Administration Act of 1979, as amended, Title 50, U.S.C., App.2401 et seq. Violations of these export laws are subject to severe criminal penalties.

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