

Torayca™ T1000G is one of the flagship carbon fibers of the Torayca™ intermediate modulus range with excellent processability in traditional manufacturing methods such as filament winding. Suitable for lightweight, tensile strength critical applications such as pressure vessels for aerospace vehicles and satellites. Manufactured in Japan.

PRODUCT DESIGNATION

T1000G	B	12 000	4	0	D
Fiber Type	Twist*	Filament Count	Sizing Type	Surface Treatment	Sizing Amount

*Blank: Twisted
B: Untwisted

RESIN SYSTEM COMPATIBILITY

SIZING TYPE & AMOUNT	RESIN SYSTEM COMPATIBILITY	METHOD
40D (0.7%)	Epoxy, phenolic, BMI	TY-QA-005

FIBER PROPERTIES

PROPERTY	UNIT	FILAMENT COUNT	NOMINAL VALUE*	METHOD
Tensile Strength	MPa (kgf/mm ²)		6370 (650)	TY-QA-002
Tensile Modulus	GPa (10 ³ kgf/mm ²)		294 (30.0)	TY-QA-002
Elongation	%		2.2	TY-QA-002
Density	g/cm ³		1.80	TY-QA-003
Yield	g/1000m	12 000	485	TY-QA-004

* Lot properties are reported as average values of a test set per bobbin sampled. The stated values are typical values. For design purposes, please contact us.

FUNCTIONAL PROPERTIES

PROPERTY	UNIT	FILAMENT COUNT	NOMINAL VALUE
Specific Heat	Cal/g.°C		0.18
Electric Resistivity	x 10 ⁻³ Ω.cm		1.4
CTE	α10 ⁻⁶ /°C		-0.55
Thermal Conductivity	Cal/cm.S.°C		0.0765
Filament Diameter	μm		5
Cross Sectional Area	mm ²	3 000	0.27

COMPOSITE PROPERTIES*

PROPERTY	UNIT	NOMINAL VALUE
Tensile Strength	MPa (kgf/mm ²)	3040 (310)
Tensile Modulus	GPa (10 ³ kgf/mm ²)	160 (16.5)
Tensile Strain	%	1.9
Compressive Strength	MPa (kgf/mm ²)	1570 (160)
Flexural Modulus	GPa (10 ³ kgf/mm ²)	145 (15.0)
ILSS	MPa (kgf/mm ²)	110 (11)

* Toray 3631 – 180°C resin system. Measured temperature: RT. Normalized to 60% fiber volume.

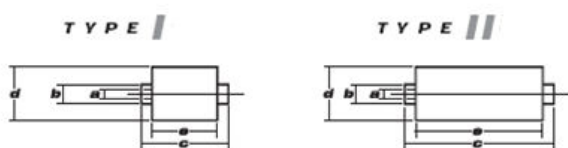
PACKAGING

Each bobbin of TORAYCA carbon fibre is protected against dust and packed in container to prevent damage during transportation

The table below summarizes the tow sizes 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		
12K	2.0	II	76.5	82.5	280	140	252	12	24

BOBBIN TYPE:



Please refer to SDS for handling and disposal.

REQUIREMENTS

Shelf Life: 24 months from month of manufacture, if stored under ambient condition

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