

The most renowned fiber in the composite industry . Torayca™ T700S offers high mechanical performance and is perfectly adapted to large-scale industrial production, including compressed gas storage tanks (natural gas, hydrogen, etc.). T700S is also the benchmark for other niche markets such as automotive, marine applications, sports and leisure, civil engineering, etc. Manufactured in France, Japan, the USA and Korea.

PRODUCT DESIGNATION

T700S	C	24 000	5	0	C
Fiber Type	Twist*	Filament Count	Sizing Type	Surface Treatment	Sizing Amount

*C: Never Twisted

RESIN SYSTEM COMPATIBILITY

SIZING TYPE & AMOUNT	RESIN SYSTEM COMPATIBILITY	METHOD
50C (1%)	Epoxy, phenolic, polyester, vinyl ester	TY-QA-005
F0E (0.7%)	Vinyl ester, epoxy	TY-QA-005
60E (0.3%)	Epoxy	TY-QA-005
60D (0.8%)	Epoxy	TY-QA-005
20C (1%)	Epoxy	TY-QA-005

FIBER PROPERTIES

PROPERTY	UNIT	FILAMENT COUNT	NOMINAL VALUE*	METHOD
Tensile Strength	MPa (kgf/mm ²)		4900 (500)	TY-QA-002
Tensile Modulus	GPa (10 ³ kgf/mm ²)		230 (23.5)	TY-QA-002
Elongation	%		2.1	TY-QA-002
Density	g/cm ³		1.80	TY-QA-003
Yield	g/1000m	12 000	800	TY-QA-004
		24 000	1650	

* 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		1.6
CTE	α10 ⁻⁶ /°C		-0.38
Thermal Conductivity	Cal/cm.S.°C		0.0224
Filament Diameter	μm		7
Cross Sectional Area	mm ²	12 000	0.44
		24 000	0.92

COMPOSITE PROPERTIES*

PROPERTY	UNIT	NOMINAL VALUE
Tensile Strength	MPa (kgf/mm ²)	2550 (260)
Tensile Modulus	GPa (10 ³ kgf/mm ²)	135 (14.0)
Tensile Strain	%	1.7
Compressive Strength	MPa (kgf/mm ²)	1470 (150)
Flexural Modulus	GPa (10 ³ kgf/mm ²)	120 (12.3)
ILSS	MPa (kgf/mm ²)	69 (7)

* Toray 2500 – 120°C resin system. Measured temperature: RT. Normalized to 60% fiber volume.

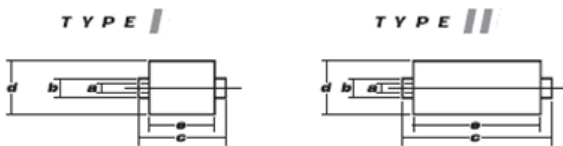
PACKAGING

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	4.0	II	76.5	82.5	280	170	252	6	24
	6.0	II	76.5	82.5	280	200	252	4	24
	8.0	II	76.5	82.5	280	220	252	90	720
24K	4.0	II	76.5	82.5	280	170	252	6	24
	6.0	II	76.5	82.5	280	200	252	4	24
	8.0	II	76.5	82.5	280	220	252	90	720

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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