

2500 PREPREG SYSTEM

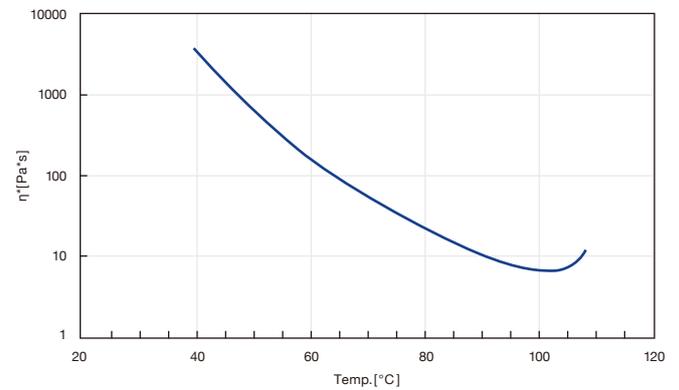
2500 series prepregs are standard multipurpose 120 to 135°C cure systems. They are available in a variety of configurations, including unidirectional sheets and fabrics.



NEAT RESIN PHYSICAL PROPERTIES

PROPERTY	METHOD	VALUE
Tg (Dry)	DMA@5°C/min Cure condition:130°C×120min	130
Gel Time	Toray method (compliant with ASTM)	438 second (125°C)
		320 second (130°C)
		200 second (140°C)
		110 second (150°C)
		100 second (160°C)

RESIN VISCOSITY CURVE



TYPICAL LAMINATE PROPERTIES

Prepreg Type		P 605_F	P1105_F	P1205_F	P1305_F	
CF Type		M46J	M50J	M55J	M60J	
PROPERTY	METHOD	UNIT	VALUE	VALUE	VALUE	VALUE
0° Tensile Strength*	Toray method (compliant with ASTM)	MPa	2200	2070	2050	2010
0° Tensile Modulus*	Toray method (compliant with ASTM)	GPa	266	292	342	358
90° Tensile Strength	Toray method (compliant with ASTM)	MPa	47	42	37	33
0° Compressive Strength*	Toray method (compliant with SACMA (SRM1R))	MPa	1110	1000	910	780
0° Flexural Strength*	Toray method (compliant with ASTM)	MPa	1450	1310	1180	1080
0° Flexural Modulus*	Toray method (compliant with ASTM)	GPa	219	241	274	299
Inter-laminar Shear Strength	Toray method (compliant with ASTM)	MPa	83	80	72	71
±45° In Plane Shear Strength	Toray method (compliant with ASTM)	MPa	74	71	52	56
±45° In Plane Shear Modulus	Toray method (compliant with ASTM)	GPa	4.8	4.4	4.6	4.7

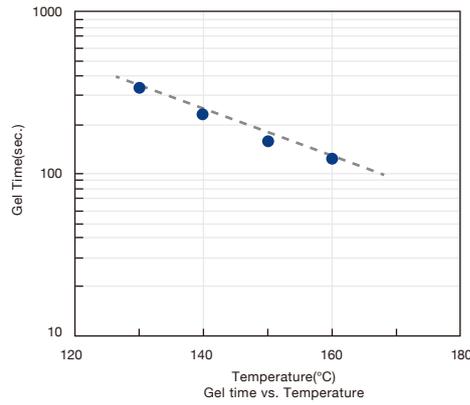
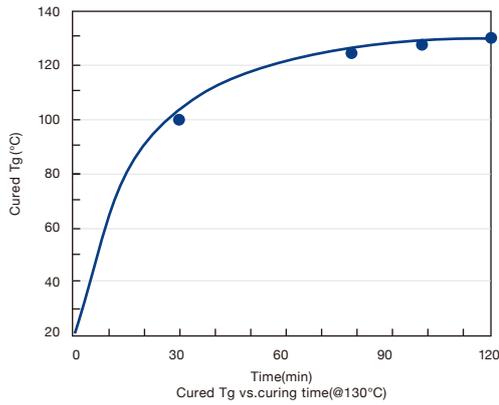
* Vf60%

STORAGE LIFE

Storage temperature

-18°C or less	6 months
5°C or less	3 months
20°C or less	1.5 months

CURING CHARACTERISTICS



Specifications of Torayca® prepreg products

Standard length	<ul style="list-style-type: none"> • Unidirectional prepreg : 100 m • Woven prepreg : 50 or 100 m
Packing form	<p>The prepreg is rolled around a paper tube together with a silicon-coated separation paper, and the roll is packed in a sealed polyethylene bag to prevent moisture absorption.</p> <ul style="list-style-type: none"> • Diameter of paper tube for unidirectional prepreg : 300 mm in inner diameter • Diameter of paper tube for woven prepreg : 76 or 300 mm in inner diameter
Product shipment	<p>The 180°C curing type is shipped refrigerated (-18°C or less). The 130°C curing type is shipped on regular trucks unless otherwise requested.</p>
Handling precautions	<ol style="list-style-type: none"> 1. Store the received prepreg in a freezer or refrigerator without delay. 2. Torayca® prepreg has been adjusted to have the best tackiness at room temperature (24 ± 3°C). 3. Mixing-in of impurities into the prepreg may cause curing problems or defective product. 4. Implement safety measures when handling the prepreg. <ul style="list-style-type: none"> • Epoxy resin may cause inflammation to some people. • Ventilate the work room well to prevent resin volatile matter from staying indoors. • Torayca® is a good conductor. Give consideration to electrical apparatuses. • Do not incinerate waste carbon fiber materials and carbon fiber induced products, but dispose of them correctly as industrial waste.

Handling precautions for carbon fiber

- Carbon fiber is conductive. Implement dust-proof measures to prevent electrical equipment from shorting, malfunctioning, etc., due to fibers scattering and flying around in the work area.
- No cases of health problems due to carbon fiber have been reported, but short fibers may attach to the skin or viscous membrane to cause itchiness or inflammation. When handling carbon fiber, wear a mask, gloves and other protective equipment to prevent carbon fiber from being inhaled or attaching to the skin.
- Incinerating waste material of carbon fiber or carbon fiber composite material may cause fibers to scatter and fly around and cause electrical failures. It is appropriate to bury such material as industrial waste.

Cautions

1. This product documentation does not guarantee the result or product safety/compliance achieved by applying the information provided herein. When using the product, confirm its safety/compliance according to the purpose of use.
2. Our carbon fiber Torayca® products or technologies relating to the design, manufacturing or use thereof may be classified as the goods specified in 1 to 15 of Appended Table 1 of the Export Trade Control Order, or as the technologies specified in 1 to 15 of Appended Table 1 of the Foreign Exchange Order, or as other goods/technologies that may be specified by the government as being subject to export control for national security reasons.

When exporting or providing to a non-resident any such Torayca® product or any such technology relating to the design, manufacture or use of Torayca® product, an export permission or service transaction permission must be obtained from the Minister of Economy, Trade and Industry or other necessary procedure must be taken according to the Foreign Exchange and Foreign Trade Act or other relevant law, notice, etc.

Torayca® is a registered trademark of Toray's high-performance carbon fiber.

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