

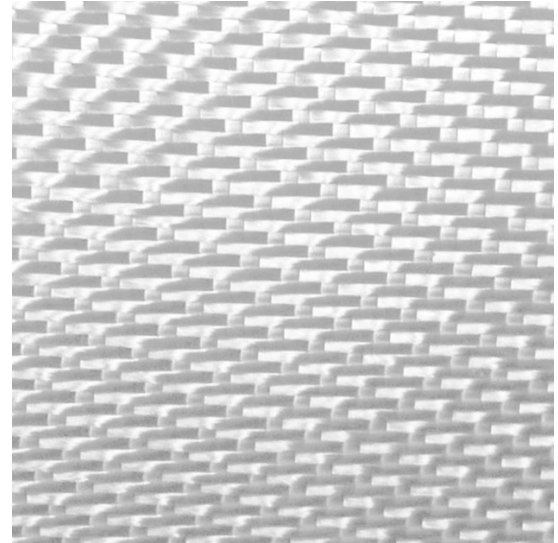
7781 Fiberglass Room Temperature Storage (RTS) Prepreg

Fiberglass Room Temp Prepreg fabric that does not need freezer storage and has long out life. Ideally used when long out life is needed, and high-temp capabilities are not required.

PRODUCT DESCRIPTION

Our Fiberglass Room Temperature Prepreg is an 8.8 oz 8 Harness Satin Weave E-Glass fabric impregnated with a thermosetting epoxy resin system. It can be stored at room temperatures and does not require freezer storage. With the long out life of the resin matrix, the fiberglass prepreg can be shipped and processed at room temperatures. It is ideal for use when a long shelf life is desired, high-temperature capabilities are not required and controlled resin content is wanted.

The 8 Harness is a highly pliable fabric is ideal for applications with compound curves. The unique epoxy resin system allows for various flexible cure cycles and has a long out-life.



PHYSICAL FABRIC PROPERTIES

Weight:	8.81 oz/yd ² (299gsm)
Thickness:	.008"
Width:	50"
Weave:	8 Harness Satin (8HS)
Construction (Warp/Fill)	57 x 54
Fiber Type:	E-Glass
Resin Matrix:	Thermosetting Epoxy
Resin Content:	30% by Weight

TECHNICAL RESIN PROPERTIES*

Density	1.22 g/cc	.0441 bs/in ³	ASTM D 792
Tensile Strength	76.5 MPa	11.1 kpsi	ASTM D 638
Tensile Modulus	10.7 GPa	427 kpsi	ASTM D 638
Strain (% Elongation)	3.75 %		ASTM D 638

FEATURES/BENEFITS

- Long shelf life
- Tailored flow and tack levels
- Excellent surface gloss
- Excellent outgas performance

USES INCLUDE

- High pressure tanks
- Rocket motor cases
- Sporting goods

SHELF LIFE

- 30 months at -18°C (0°F)
- 12 months at 24°C (75°F)
- 6 months at 32°C (90°F)

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TECHNICAL RESIN PROPERTIES CONTINUED

DMA - Dry Glass Transition

Glass Transition – E" Peak	132°C	270°F	ASTM E 1640
Glass Transition – E' Onset	130°C	265°F	ASTM E 1640
Glass Transition – Tan δ Peak	146°C	295°F	ASTM E 1640

DMA – Wet Glass Transition**

Glass Transition – E" Peak	86°C	187°F	ASTM E 1640
Glass Transition – E' Onset	81°C	179°F	ASTM E 1640
Glass Transition – Tan δ Peak	98°C	208°F	ASTM E 1640

Water Absorption**	3.8 %		ASTM D 570
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*Cure cycle: 1 hour at 154°C

**DMA wet glass transition and water absorption measured after 24-hour water boil

COMPOSITE PROPERTIES

0° Tensile Strength	0.75 GPa	110 kpsi	ASTM D3039
0° Tensile Modulus	76 GPa	11 Mpsi	ASTM D3039
0° Tensile Percent Strain		1.0 %	ASTM D3039
0° Tensile Poisson's Ratio		0.20	ASTM D3039
0° Compressive Strength	0.62 GPa	9.0x101 kpsi	SACMA SRM 1R-94
0° Compression Modulus	52 GPa	7.5 Mpsi	SACMA SRM 1R-94
Short Beam Strength	63 MPa	9.1 kpsi	ASTM D2344
Flexural Strength	0.74 GPa	108 kpsi	ASTM D790

Reinforcement: T300-3K 2x2 twill 50" carbon fiber fabric.

Composite properties are express to two significant figures.

Cure cycle: 4 hours at 132°C (270°F), via vacuum bag oven cure, tests conducted at 22°C (72°F)

SHELF LIFE DETAILS

The material should remain sealed when not is use and be stored indoors, out of the weather.

- The shelf life is 6 months from the date of manufacture when the maximum storage temperature shall not exceed 90°F (32°C).
- The shelf life is 12 months from the date of manufacture when the maximum storage temperature shall not exceed 75°F (24°C).
- The shelf life is 30 months from the date of manufacture when the maximum storage temperature shall not exceed 0°F (-18°C), with an additional 6 months at <75 °F (24°C).

CURE CYLCES

There are three optional cure cycles for composite parts <6.35 mm or 0.25 inches in thickness. All three will produce similar properties.

- 5°F per-minute ramp up to 310°F (154°C)
 - Hold for 1 hour
 - <5°F per-minute ramp down to at least 150°F (66°C) before removing from oven
- 5°F per-minute ramp up to 290°F (143°C)
 - Hold for 2 hour
 - <5°F per-minute ramp down to at least 150°F (66°C) before removing from oven
- 5°F per-minute ramp up to 270°F (132°C)
 - Hold for 4 hour
 - <5°F per-minute ramp down to at least 150°F (66°C) before removing from oven