



**FIBERGLASS REINFORCED POLYESTER PANEL
FOR DRY AND REFRIGERATED FREIGHT TRAILERS**





STABILIT IS A LEADING GLOBAL MANUFACTURER OF FIBERGLASS REINFORCED POLYESTER PANELS.

With over 60 years of experience in the market, Stabilit has established its leadership using cutting edge technology at every one of our manufacturing plants as well as providing a wide range of products and solutions that are purposefully designed with customer satisfaction in mind.

Steeliner High Gloss is an exterior sidewall FRP panel that is manufactured using polyester resins and reinforced with fiberglass for high quality performance and a smooth, shiny look.

Our product’s weight makes freight trailers lighter, saving on energy consumption and fuel costs, which in turn benefits the transportation industry and ultimately helps the environment.

Steeliner FRP products are low maintenance and boast the USDA’s recognitions. Our products, in their different variations, are manufactured using top quality polyester resins and high fiberglass content, providing excellent mechanical properties.

These products are designed for different applications, including external walls of dry and refrigerated freight trailers. Special formulations ensure high performance and GelCoat finish that helps against yellowing and provides high aesthetics.

GENERAL SPECIFICATIONS

	STEELINER INTERIORS	STEELINER INTERIORS WOVEN ROVING (WR)	STEELINER EXTERIORS GELCOAT	STEELINER SUBPAN	STEELINER TRANSLUCENT ROOFS	STEELINER TRANSLUCENT ROOFS SCRIM
Application	Cladding for internal walls		Cladding for exterior walls	Subpan paneling	Translucent roofs	
Color	Opaque white		Arctic white / Opaque white	Opaque white	Translucent	Translucent (Anti-scratch)
Finish	Smooth Embossed	Smooth Embossed	Smooth	Embossed	Embossed	
Measurements	Maximum length of 500 linear feet per coil & widths up to 103 inches					
Thickness	.090" (2.3 mm)	.060" (1.5 mm) .075" (1.9 mm)	.050" (1.27 mm), .060" (1.5 mm) With veil .075" (1.9 mm), .090" (2.3 mm) With veil	.060" (1.5 mm)	.060" (1.5 mm) .075" (1.9 mm)	.060" (1.5mm) .075" (1.9 mm) .090" (2.3 mm)

Contact your Sales Representative for Steeliner samples.

Steeliner high gloss is a glossy FRP panel that is manufactured using polyester resins and reinforced with fiberglass for high quality performance and a smooth, shiny look.

Steeliner High Gloss FRP products come with a special GelCoat finish that ensures a high shine over a long period of time. It also includes top quality stable colorings that help avoid surface porosity. A special resin formulation provides greater strength and performs better than any other product in the field under the most extreme weather conditions. Steeliner High Gloss' cutting edge processes are tailored to the highest expectations for both quality and design.



The GelCoat layer provides:



Protection against humidity and UV rays



Protection against mold, bacteria, and odors



Extends unit lifespan



Smooth and glossy finish for a longer life



ADVANTAGES

- Superior finish: smooth, mirror-like finish, no visible fiberglass fibers.
- Greater resistance to extreme weather conditions with specialized resins.
- Resistant to mold and bacteria.
- UV stabilized

BENEFITS

- Improved insulating properties, controls internal temperature, and reduces truck noise.
- Savings: Long-lasting material, no need for costly repairs or special maintenance.
- Simplicity: Looks great after a quick wash.

TECHNICAL PROPERTIES FOR STEELINER HIGH GLOSS EXTERIORS

Profile	Values	Unit of Measure	Specification Method
Deflection Under Load (HDT)	> 250	°C	ISO 75-1
Density	.4	g/cm ³	ASTM D792
Tensile Modulus	915,623	PSI	ASTM D638
Tensile Strength	11,312	PSI	ASTM D638
Tensile Elongation	1.5	%	ASTM D638
Charpy Impact	68.3	kJ/m ²	UNE-EN-ISO179
Flexural Strength	21,175	PSI	ASTM D790
Flexural Modulus	596,104	PSI	ASTM D790
Taber Abrasion	0.079	g/1000 cycles	ASTM D4060
Aging in UV Light	AE= 1.8 AY=2.6		ASTM G53
Water Absorption	1.05%	%	ISO 62
Hardness	9B	Barcol	ASTM D2583

The GelCoat enables high gloss panels to remain glossy for a longer time, as well as provides high color stability and avoids surface porosity. Steeliner High Gloss panels have low thermal conductivity, which makes them less susceptible to expansion or contraction when exposed to fluctuating temperatures. This also contributes to significant energy savings as well as makes the panels ideal for either interior or exterior applications.

Certain substrates that can be adhered to the product include:

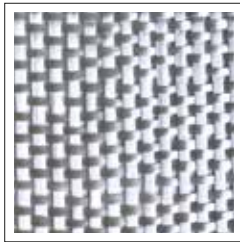
- Polyurethane foams
- Wood
- Honeycomb panels
- Polystyrene panels (expanded - extruded)

STEELINER® FOR EXTERIORS

The product is manufactured using premium polyester resins and high fiberglass content, providing excellent mechanical resistance.

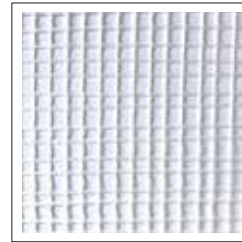
This product is designed for different applications, including the external walls of dry and refrigerated freight trailers. The special resin formulation ensures high performance and GelCoat finish helps deter yellowing while providing a high aesthetic touch.

In addition to standard Steeliner reinforcements, others include:



WOVEN ROVING (WR)

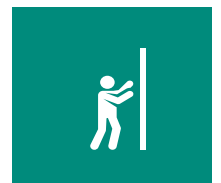
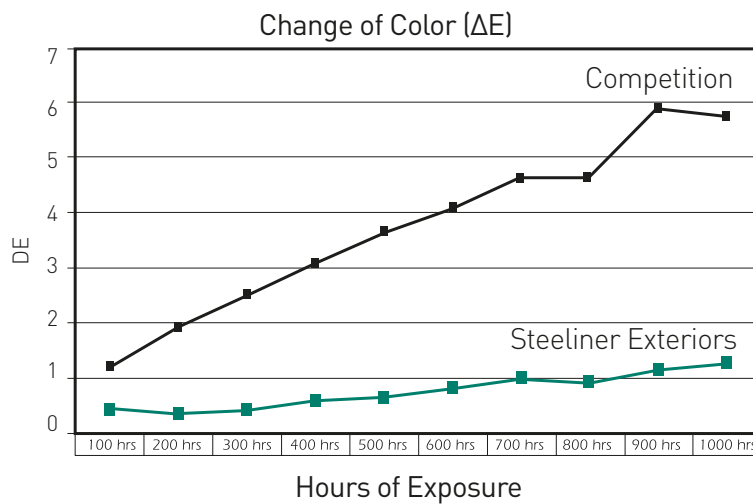
Increases the material's mechanical properties.



SCRIM (SCR)

Reduces tearing and damage propagation while increasing strength and flexibility in high stress situations.

Table: Yellowing of Steeliner Exteriors vs. the Competition





TECHNICAL CHARACTERISTICS FOR STEELWALL EXTERIORS

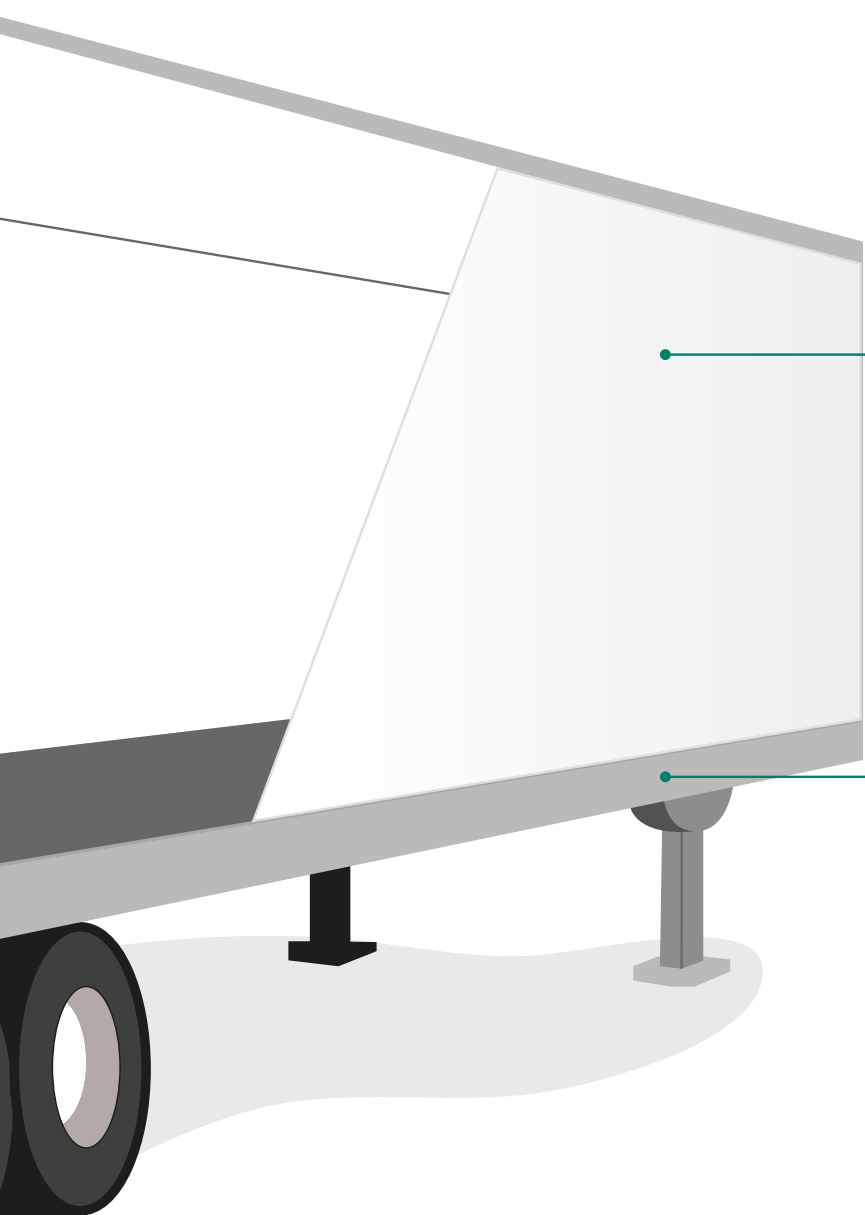
ASTM Method of Specification	TESTING	UNIT OF MEASURE	STEELWALL EXTERIORS GELCOAT	STEELWALL EXTERIORS GELCOAT WITH WR
D-790	Flexural Strength	PSI	19 x 10 ³	30 x 10 ³
D-790	Flexural Modulus	PSI	6 x 10 ⁵	9 x 10 ⁵
D-638	Tensile Strength	PSI	12 x 10 ³	28 x 10 ³
D-638	Tensile Modulus	PSI	9 x 10 ⁵	1.5 x 10 ⁶
D-638	Tensile Elongation	%	1.5	1.3
D-256	Izod Impact	Ft-lb/in notched	6	11
D-696	Coefficient of Linear Expansion	in/in°F	1.7 x 10 ⁻⁵	1.6 x 10 ⁻⁵
D-2583	Hardness	Barcol	40	40
C-177	Thermal Conductivity	BTU·in/h·ft ² ·°F	0.45	0.45
D-570	Water Absorption	%	0.25	0.25
D-792	Density	g/cm ³	1.53	1.61

ADVANTAGES

- Lightweight paneling
- Impact resistant
- Does not rust
- Does not generate mold or absorb humidity or odors
- Resistant to chemicals and abrasives
- Anti-graffiti
- Reduces transportation and maintenance costs
- Extends vehicle usage life

PRODUCT MIX





STEELWALL EXTERIORS WITH GELCOAT

- Steelwall Exteriors with Fiberglass
- Steelwall Exteriors with GelCoat and Woven Roving



STEELINER FOR SUBPANS

STEELINER® FOR INTERIORS

Steelinert FRP is developed to cover walls. In addition to being extremely light, it is intended to reinforce dry and refrigerated freight trailer side walls and is manufactured with high quality polyester resins and high fiberglass content that provide reinforcement.

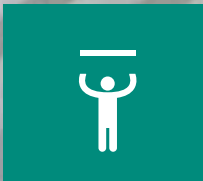
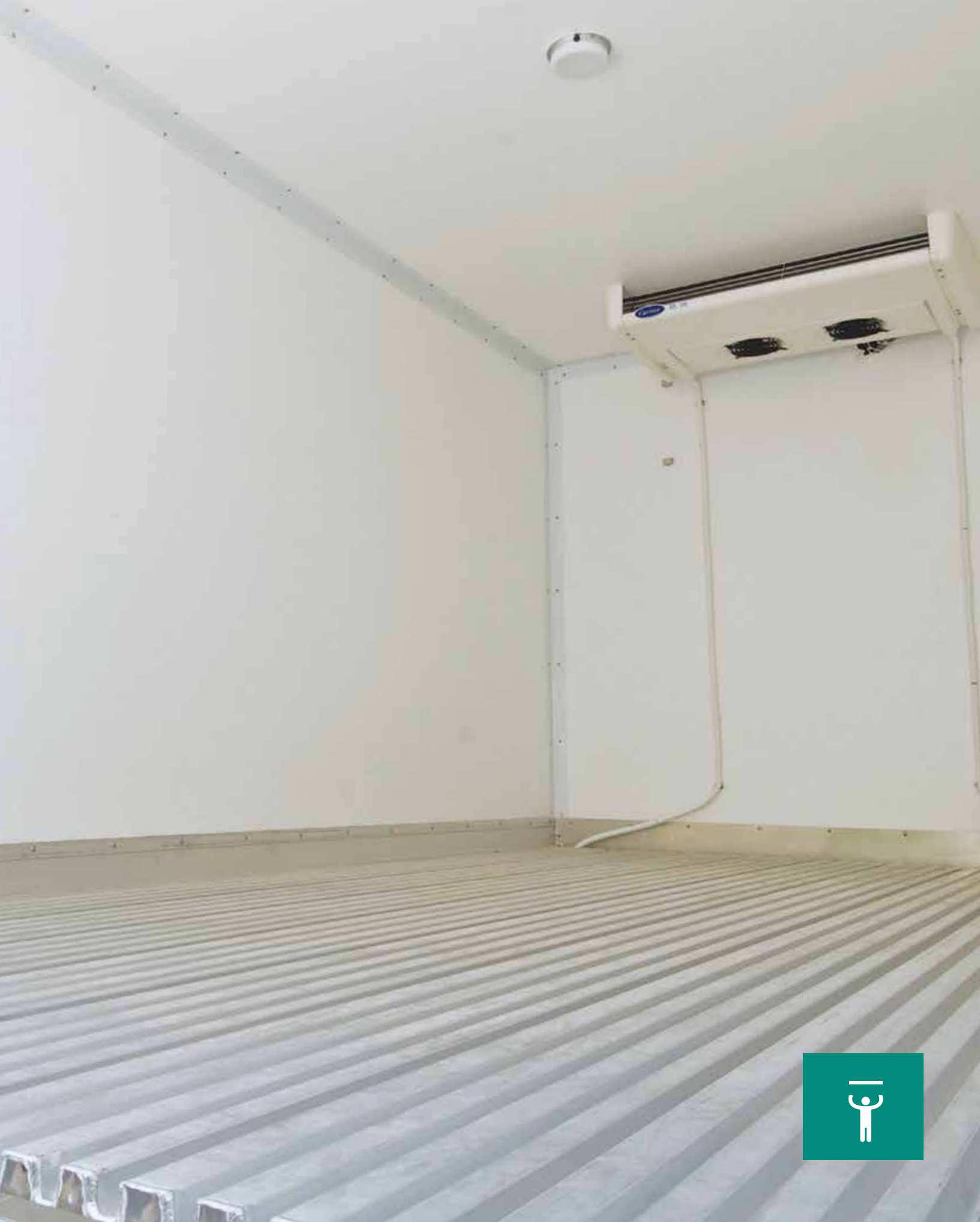
The plastic covering provides excellent mechanical properties, in addition to maximum structural stability. High fiberglass content ensures greater protection against impact, corrosion, and high rigidity, in addition to making cleaning much easier.

CHARACTERISTICS AND BENEFITS

- Superior structural stability
- High impact resistance
- Corrosion resistant
- Highly durable
- Chemical resistant
- Easy to clean
- Low maintenance costs
- Extends vehicle usage life
- Lightweight

TECHNICAL CHARACTERISTICS FOR STEELWALL INTERIORS

ASTM Method of Specification	TESTING	UNIT OF MEASURE	STEELWALL INTERIORS	STEELWALL INTERIORS WITH WOVEN ROVING
D-790	Flexural Strength	PSI	18 x 10 ³	25 x 10 ³
D-790	Flexural Modulus	PSI	6.5 x 10 ⁵	9 x 10 ⁵
D-638	Tensile Strength	PSI	9 x 10 ³	28 x 10 ³
D-638	Tensile Modulus	PSI	1 x 10 ⁶	1.5 x 10 ⁶
D-638	Tensile Elongation	%	1.5	1.5
D-256	Izod Impact	Ft-lb/in notched	9	10.5
D-696	Coefficient of Linear Expansion	in/in°F	1.4 x 10 ⁻⁵	1.4 x 10 ⁻⁵
D-2583	Hardness	Barcol	40	40
C-177	Thermal Conductivity Factor	BTU·in/h·ft ² ·°F	0.5	0.5
D-570	Water Absorption	%	0.3	0.3
D-792	Density	g/cm ³	1.4	1.5





STEELINER® FOR TRANSLUCENT ROOFS

A special translucent panel for freight trailer roofs that transmit 10% to 30% of light energy.

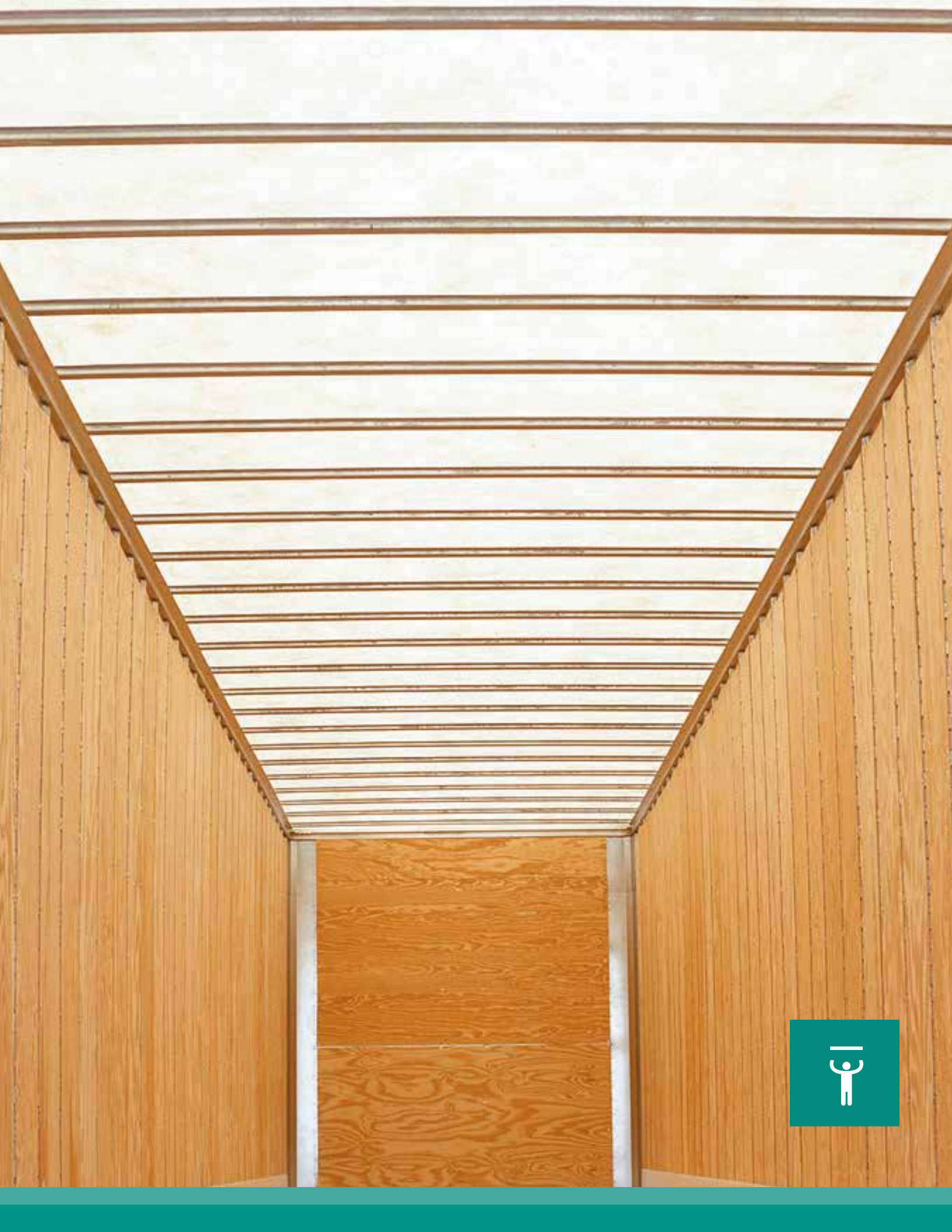
It provides great strength and excellent dimensional stability. These products protect against UV rays which extends their durability with age. The edges of the panels may contain additional fiberglass layers for greater mechanical strength, which prevents the product from tearing, or dislodging of fasteners placed at the ends.

CHARACTERISTICS AND BENEFITS

- Light transmission
- UV protected
- Impact resistant
- Reinforced edges
- Corrosion and rust resistant
- Greater visibility during loading and unloading operations
- Lightweight

TECHNICAL CHARACTERISTICS FOR STEELROOF

ASTM Method of Specification	TESTING	UNIT OF MEASUREMENT	STEELROOF	STEELROOF WITH SCRIM	STEELROOF WITH WR
D-790	Flexural Strength	PSI	26 x 10 ³	25 x 10 ³	25 x 10 ³
D-790	Flexural Modulus	PSI	8 x 10 ⁵	9 x 10 ⁵	9 x 10 ⁵
D-638	Tensile Strength	PSI	11 x 10 ³	28 x 10 ³	28 x 10 ³
D-638	Tensile Modulus	PSI	1 x 10 ⁶	1.1 x 10 ⁶	1.5 x 10 ⁶
D-638	Tensile Elongation	%	1.5	1.5	1.5
D-256	Izod Impact	Ft-lb/in notched	10.5	10.5	12
D-696	Coefficient of Linear Expansion	in/in°F	1.4 x 10 ⁻⁵	1.4 x 10 ⁻⁵	1.4 x 10 ⁻⁵
D-2583	Hardness	Barcol	40	40	40
C-177	Thermal Conductivity	BTU·in/h·ft ² ·°F	0.5	0.5	0.5
D-570	Water Absorption	%	0.3	0.3	0.3
D-792	Density	gr/cm ³	1.4	1.5	1.5
D-624	Tear Strength	Lb/in	800	1300	2000



STEELINER® FOR SUBPANS

Steeliner FRP for subpans, or non-visible areas, is best known for its great ability to resist impacts, harsh chemical agents and extreme outdoor temperature fluctuations. Steeliner's high tension resistance significantly reduces vibration during transportation which helps to avoid normal wear and tear.

CHARACTERISTICS AND BENEFITS

- Highly resistant to impacts, humidity, and chemical agents.
- Resistant to extreme outdoor temperatures
- Corrosion resistant
- High resistance to traction
- Reduces vibrations
- Prevents fractures

TECHNICAL CHARACTERISTICS FOR STEELINER FOR SUBPANS

ASTM Method of Specification	TESTING	UNIT OF MEASUREMENT	SUBPAN
D-790	Flexural Strength	PSI	18 x 10 ³
D-790	Flexural Modulus	PSI	6.5 x 10 ⁵
D-638	Tensile Strength	PSI	9 x 10 ³
D-638	Tensile Modulus	PSI	1 x 10 ⁶
D-638	Tensile Elongation	%	1.5
D-256	Elongation	Ft-lb/in notched	13
D-696	Coefficient of Linear Expansion	in/in°F	1.4 x 10 ⁻⁵
D-2583	Hardness	Barcol	40
C-177	Thermal Conductivity Factor	BTU·in/h·ft ² ·°F	0.5
D-570	Water Absorption	%	0.3
D-792	Density	g/cm ³	1.4





RECOMMENDATIONS

Caution

Always use protective eye wear and a face mask when cutting FRP products. This protects against any dust and fiberglass particles.

Cutting

Steeliners panels can be cut using utility shears, a cutting press, a circular, carbide tipped saw and a jigsaw. It is essential to make precise measurements before cutting the panels.

Installation

Can be bonded with special adhesives, rivets or both. Should adhesives be applied, the area should be well ventilated and must be dust, grease, and humidity free.

Storage

The product is best stored indoors or under cover. Avoid prolonged exposure of panels or coils to sunlight, as well as any water accumulation when covered.

Maintenance

With time, discoloring or staining may appear on the panels. To avoid, clean often using water and a mild detergent.

For more information:
USA: info@glasteel.com
Canada: info@grahamfrp.com

STEL-FLY-SM-OCT17



Headquarters & Distribution Centers

285 Industrial Drive
Moscow, TN 38057
901-877-3010
Fax: 901-877-1388

2928 Elder Dr.
Goshen, IN 46526
574-642-30296
Fax: 574-642-3059

2725 State Hwy 360,
Suite 200,
Grand Prairie, TX 75052
817-831-0505
Fax: 817-831-2001

Stabilit Canada
64 Maple Ave,
Inglewood, ON L7C 1J5
905-838-2944
Fax: 905-838-3386