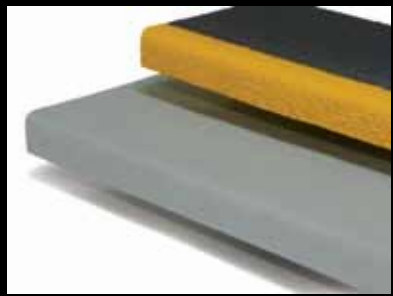


# Fiberglass Stair Solutions

Products Brochure

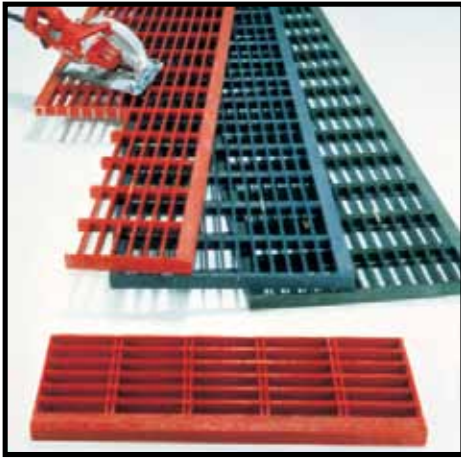


High Performance Composite Solutions



- Low Install Cost
- Time
- Non-toxic
- Slip resistant
- Non-conductive
- No maintenance
- Durable
- Safe
- Fire resistant
- HIGH Strength

# Stair Solutions - Molded Stair Treads



Fibergate provides several slip and corrosion resistant products for your stairway safety needs. Our complete stair solution line includes panels in a one-piece molded configuration or assembled pultruded configuration for new or replacement steps; covered stair treads to replace deteriorating concrete steps; or stair tread covers designed to add slip and corrosion resistance to existing metal, concrete or wood steps. All Fibergate stair treads are engineered to exceed OSHA and other model building code standards for safety, strength, durability and corrosion resistance. Fibergate offers a wide range of fabrication services from cutting treads to desired lengths to turnkey options including drafting, engineering and fabrication of entire stairways. Contact Fibergate for information on spans greater than 42".

## Fibertred® Panels

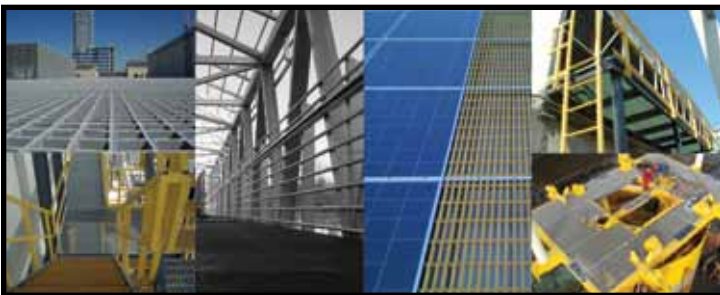


Fibertred stair treads are available in the same high performance resin formulations as Fibergate grating. Unique cutting channels spaced at 6" intervals provide efficient utilization when custom fitting treads into stairways. These channels also ensure that all standard stair tread widths are terminated with closed ends. Up to five 24" wide stair treads can be cut from each side of a single panel. A 1-1/2" wide gritted strip is molded in on both sides of the panel for superior slip resistance.

## Standard Fibertred® Panel

Depth	Mesh	Panel Size	Weight	Open Area
1-1/2"	1-1/2" x 6"	22-1/4" x 10'	60 lbs.	67%
1-1/2"	1-1/2" x 6"	25-1/4" x 12'	82 lbs.	67%

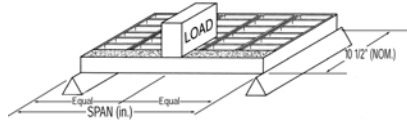
## Fibergate Markets



- Architectural
- Bridge & Highway
- Chemical
- Commercial
- Food & Beverage
- Manufacturing
- Metals & Mining
- Microelectronics
- Oil & Gas
- Pharmaceutical
- Power
- Pulp & Paper
- Recreation
- Telecommunications
- Transportation
- Water & Wastewater

# Stair Solutions - Molded Stair Treads

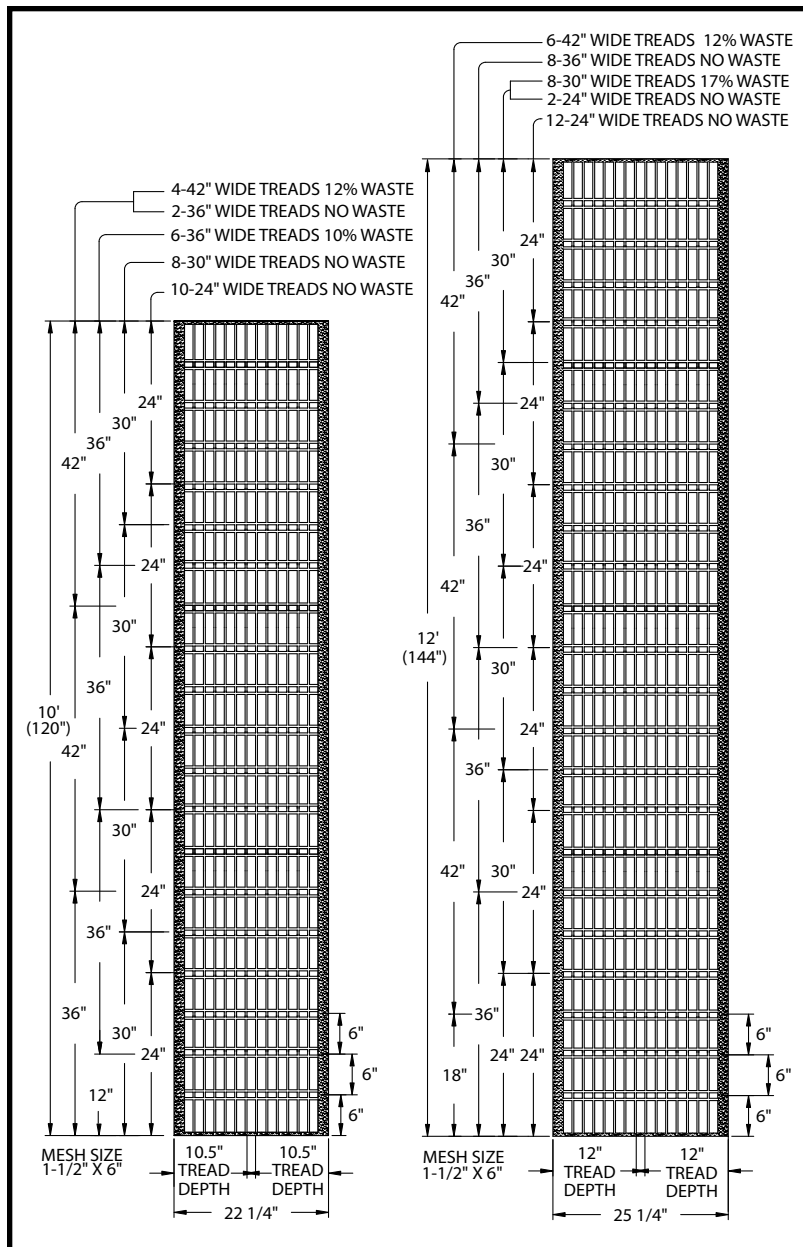
## Fibertred® Load Table



Load (lb)	Span (in)	18	24	30	36	42	48
	Span/150	0.12	0.16	0.20	0.24	0.28	0.32
250		0.03	0.05	0.09	0.16	0.25	0.41
500		0.06	0.10	0.19	0.32	0.50	--

### NOTES:

1. It is suggested that stair tread deflections be limited to Span/150. Deflections based on this ratio are at the top of the table.
2. Deflections in the body of the table are for concentrated loads of both 250 and 500 lb. A concentrated load is applied at the centerline of the tread, over a width of 4" and a depth of 6", starting at the nosing edge to simulate the landing of a foot.
3. Stair treads with square mesh or for longer spans are available by custom order. Please contact Fibergate for more information.



*This all FRP stairway is located at a private residence in the Pebble Beach community in California. The stairway leads from the front yard of the home to the private beach below.*



*The stairway above utilizes Fibertred molded stair treads to provide tank access at a pumping station.*

# Stair Solutions - Covered Stair Treads

## Fibergate® Covered Stair Treads

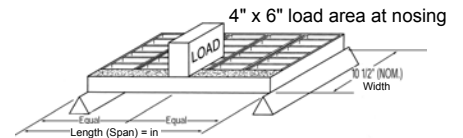


Designed as an alternative to the heavy, high-maintenance concrete or slippery metal steps, covered stair treads are designed for commercial and architectural applications where slip resistance, aesthetics and low maintenance are important considerations. Covered stair treads are available in a light gray color in the Corvex® resin system. The integrally applied grip top provides slip resistance and is suitable for barefoot traffic. The solid, impact resistant cover is able to accommodate high heel shoes. Covered stair treads can perform well in many corrosive environments including salt, continuous moisture and constant cleaning. The weight of the tread is

eighty percent lighter than that of a precast concrete step and can be easily fabricated and installed with simple wood working tools. Covered stair treads come in 12' lengths that are designed to be cut and installed on-site with a circular saw and an abrasive masonry blade. This product is ideal for motels, universities, commercial office parks, aquatic and amusement parks, or any other location where outdoor stairs are present.

## Standard Panels/Load Table

Depth	Panel Size	Weight
1-5/8"	10-5/8" x 12'	50 lbs.
1-5/8"	12-1/4" x 12'	60 lbs.
2-1/8"	10-1/4" x 12'	57 lbs.
2-1/8"	12-1/4" x 12'	68 lbs.



Tread Type (Depth x Width)	Load (lb)	Span (in) L/D=150	30	36	42	48	54	60
			0.2	0.24	0.28	0.32	0.36	0.4
1-5/8" x 10-5/8"	250		0.08	0.15	0.23	0.35	--	--
	500		0.17	0.29	0.47	--	--	--
1-5/8" x 12-1/4"	250		0.07	0.11	0.18	0.27	0.37	--
	500		0.13	0.23	0.36	--	--	--
2-1/8" x 10-1/4"	250		0.04	0.06	0.09	0.14	0.20	0.27
	500		0.07	0.13	0.19	0.28	0.39	--
2-1/8" x 12-1/4"	250		0.03	0.05	0.08	0.12	0.17	0.23
	500		0.05	0.10	0.17	0.24	0.33	0.46

## Optional Hidden Hold Down System

Contact your local Fibergate salesperson for more information. Visit [www.fibergate.com](http://www.fibergate.com) or call us at 800-527-4043.



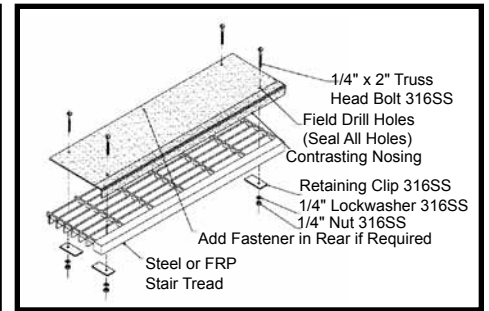
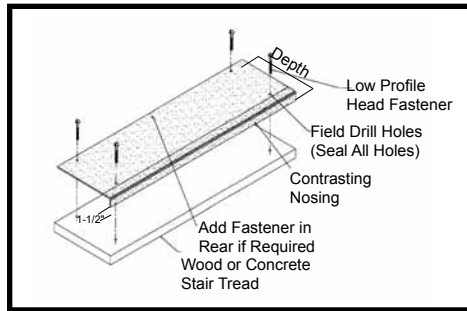
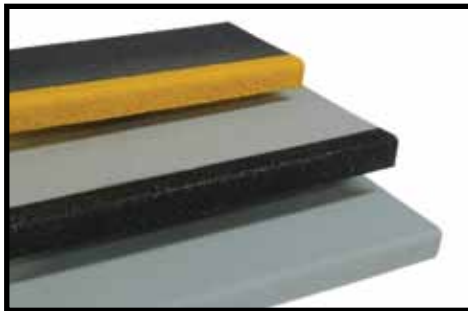
Covered stair treads, with hidden hold down clips, lead to a water slide at a municipal waterpark in Oklahoma.

# Stair Solutions - Stair Tread Covers

## Fiberplate® Stair Tread Covers

Fiberplate® stair tread covers are a convenient way to provide solid, slip resistant footing for existing treads that are still structurally sound. Stair tread covers may be installed over wood, concrete or metal steps. Standard color is dark gray with a highly visible safety yellow nosing for industrial applications and light gray for architectural applications.

An integral aluminum oxide grit-top surface provides secure footing for maximum safety and a highly durable tread. Reinforced with a woven glass mat for durability and impact resistance, these tread covers come in 8", 9", 10", 11" and 12" depths. The standard thickness is 1/8" with 1/4" thick covers available for heavy duty applications. Standard 12' panels are easily cut to size during installation, or are available precut to custom lengths.



## Phosphorescent Nosing

Fiberplate stair tread covers can be ordered with a special phosphorescent coating for the nosing area, causing it to glow even after the primary light source has been removed. The special nosing is perfect in stairways which serve as emergency exits during power outages, outdoor accessways where lighting is periodically dimmed as in arenas and concert halls, or as a safety measure for nighttime operation in outdoor applications such as on passenger ships. This special nosing has been tested in accordance with ISO/TC 8/SC 1 N. Ships and Marine Technology — Low Location Lighting on Passenger Ships. The standard colors for tread covers with phosphorescent coating is yellow.

Fiberplate stair tread covers were used over existing aluminum stairs at a UPS facility in Dallas, Texas. The original stairs were worn and unsafe. In addition, the stairway was not well lit, making it potentially hazardous when used by workers at night. The grit-top surface of Fiberplate tread covers provided slip resistance and the yellow nosing on the treads made them more visible at night, making it safe for workers.



Before



After

# Stair Solutions - Pultruded Stair Treads

## Safe-T-Span® Pultruded Industrial Stair Treads



Slip resistant and non conductive, Safe-T-Span pultruded stair treads offer the same level of safety, strength and corrosion resistance as other Fibergrate pultruded fiberglass products. Designed for use in industrial applications where wider support spans are required, Safe-T-Span pultruded stair treads are available in 1" and 1-1/2" depths in an I bar configuration with 40% and 60% open areas for most applications. A 2" depth T bar configuration, with either a 33% or 50% open area, is also available for applications requiring wider spans or lower deflections.

The application shown here utilizes Safe-T-Span pultruded stair treads. These are used in conjunction with Dynarail® handrail and Dynaform® structure to construct a stairway leading from the ocean, up the rocky side of a cliff, to a research center located on Farallon Island, off the San Francisco coast. The original stairway was constructed from wood and was unsafe. The new FRP stairway will hold up in the harsh conditions and provide safety in this wet environment.

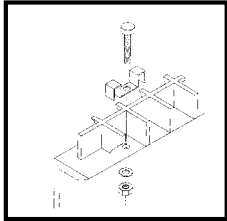
## Load/Deflection Information

TREAD TYPE	Load (lbs.)	SPAN (in.)	18	24	30	36	42	48
		SPAN/150	.12	.16	.20	.24	.28	.32
1" Deep, I6010	250		.03	.08	.14	.22	.34	.46
	500		.07	.15	.28	.44	—	—
1-1/2" Deep, I6015	250		.01	.02	.04	.06	.09	.13
	500		.02	.04	.08	.11	.18	.26
2" Deep, T5020	250		.01	.02	.03	.04	.06	.09
	500		.02	.04	.06	.09	.12	.18
1" Deep, I4010	250		.02	.05	.10	.16	.24	.33
	500		.05	.11	.20	.32	.49	—
1-1/2" Deep, I4015	250		.01	.01	.03	.04	.06	.09
	500		.02	.03	.05	.07	.12	.17
2" Deep, T3320	250		.01	.01	.02	.03	.05	.07
	500		.02	.03	.04	.06	.09	.14

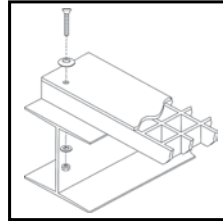
- NOTES:**
1. It is suggested that stair tread deflection be limited to SPAN/150. Deflections based on this ratio are provided at the top of the table.
  2. Deflection in the body of the table are for concentrated loads of both 250 lbs. and 500 lbs. A concentrated load is applied at the center of the tread, over a width of 4" and a length of 6", starting at the nosing edge to simulate the landing of a foot.
  3. Deflections are not appreciably different due to stair tread depth. Actual depth will vary depending on stair tread configuration.

# Stair Solutions - Accessories

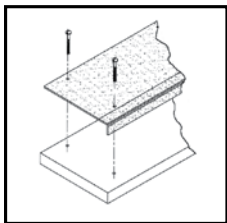
## Clip Assemblies for Stair Solutions Products



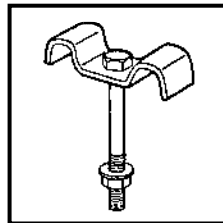
**TYPE M HOLD DOWN CLIPS:**  
Secure open mesh treads to a support using two adjacent grating bars for a secure fit. Similar in design to metal grating saddle clips.



**TYPE WLP STRUCTURAL CLIPS:**  
Secure covered treads to a structure or stair tread covers to an existing stair tread.



**TYPE H (TRUSS HEAD) STRUCTURAL CLIPS:** Secure stair tread covers to an existing stair tread.



**TYPE M HOLD DOWN CLIP ASSEMBLIES FOR PULTRUDED STAIR TREADS:**  
MI40 for I4010 and I4015 treads  
MI60 for I6010 and I6015 treads  
MT5020 for T5020 treads  
MT3320 for T3320 treads

## Sealing and Bonding Kits

To maintain corrosion resistance and structural integrity, Fibergate offers standard resin sealing in 1/2 pint and gallon kits for protecting the exposed ends of cut panels and other components. One 1/2 pint kit coats approximately 20-40 lineal feet. Sealing and bonding kits come in a natural, unpigmented color.

When a hotel chain was looking for a cost effective product to replace existing wood stairs, Fibergate checked in with the solution. Fibergate covered stair treads, in a special color formulation, were used at various hotel properties to replace the wood stairs. Not only do the stairs look better and blend well with the existing exterior of the hotel, they also provide safety for guests. This is especially important due to the exposure of various weather conditions that these stairs must endure.



Before



After

# Fibergrate Products & Services

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## Fibergrate® Molded Grating

Fibergrate molded gratings are designed to provide the ultimate in reliable performance, even in the most demanding conditions. Fibergrate offers the widest selection in the market with multiple resins and more than twenty grating configurations available in many panel sizes and surfaces.



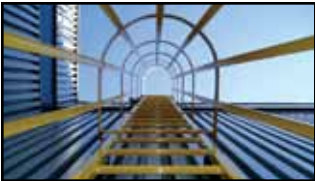
## Safe-T-Span® Pultruded Industrial and Pedestrian Gratings

Combining corrosion resistance, long-life and low maintenance, Safe-T-Span® provides unidirectional strength for industrial and pedestrian pultruded grating applications.



## Dynarail® Handrail

Easily assembled from durable components or engineered and prefabricated to your specifications, Dynarail® handrail meets or exceeds OSHA and strict building code requirements for safety and design.



## Dynarail® Safety Ladder System

Easily assembled on site or prefabricated, Dynarail® safety ladder systems meet or exceed OSHA requirements. Excellent corrosion resistance will provide many years of low maintenance service.



## Dynaform® Structural Shapes

Fibergrate offers a wide range of pultruded structural components for industrial and commercial use, including I-beams, wide flange beams, round and square tubes, bars, rods, channels, leg angles, plate and custom shapes.



## Stair Solutions

Fibergrate offers a wide range of slip resistant products to meet your stair safety needs. These durable products which include treads, tread covers and covered stair treads are a long term, cost efficient solution for your facility. Fibergrate can also design and fabricate a complete stairway for your application.



## Fabrication Services

Combining engineering expertise with an understanding of fiberglass applications, Fibergrate provides turnkey design and fabrication of fiberglass structures, including platforms, catwalks, stairways, railings and equipment support structures.

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