



AMERI-BOARD™ FG PLANK

Fiberglass Plank System for High Strength and Lightweight Applications



AN INNOVATIVE PERFORMANCE PROFILE FOR LONG-SPAN APPLICATIONS

Ameri-Board FG Plank

2X Strength Increases Span and Load Capacity

Ameri-Board FG Plank has been designed for exceptional performance in harsh corrosive environments. Exhibiting a bending strength greater than that of steel with nearly twice the stiffness of a typical pultruded plank, the high strength plank will span further and hold greater loads than ordinary pultruded planks.

Innovative Profile Includes Fire Retardant Options and Built-in Traction

The lightweight Ameri-Board FG Plank features an integrated wearing surface that is formed during the pultrusion manufacturing process. The integral wearing surface reduces the installed plank weight by eliminating the need for a secondary application of an antiskid surface to increase traction. Ameri-Board FG Planks are offered in two fire retardant options to suit a variety of applications.

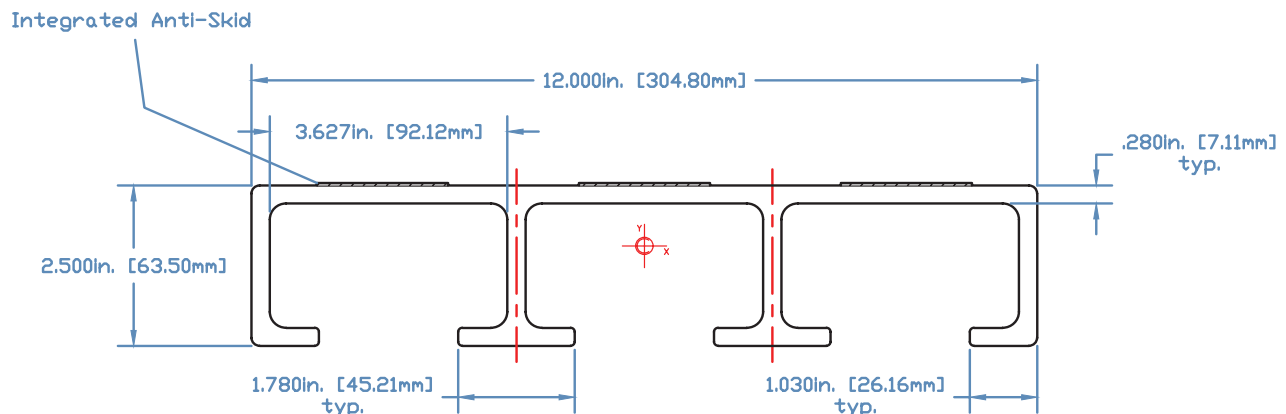
THE AMERI-BOARD FG PLANK IS AVAILABLE IN STANDARD POLYESTER AND VINYL ESTER RESIN SYSTEMS:

1500 - Standard Polyester Resin (I), Non Fire Retardant, Olive Green

1525 - Standard Polyester Resin (VFR), Fire Retardant, Slate Gray

1625 - Standard Vinyl Ester Resin (VFR), Fire Retardant, Beige

Note: minimum quantities apply, consult your sales representative for custom colors and minimum order requirements. Legacy antiskid coatings are available upon request.



Ameri-Board FG Plank is offered in partnership with American Plastic Lumber.

What Is Pultrusion?

Pultrusion is an advanced continuous manufacturing process utilized to make composite profiles with uniform cross-sections. The specified fiberglass reinforcements, in the form of roving and mats are saturated with engineered resins and channeled into a customize die with high heat. The profile exits the die as a mechanically bonded solid with the desired cross-section and performance specifications.

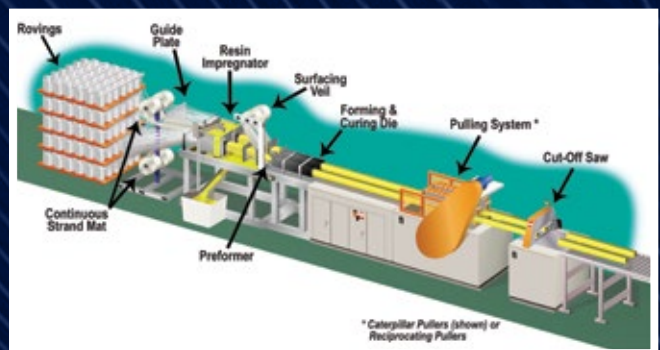




Photo Courtesy of American Plastic Lumber

Applications

- Access Platform Decking
- Beach Crossovers & Walkways
- Dock Decking
- Industrial Walkways
- Nature Boardwalks
- Rails to Trails Decking
- Stair Steps
- Water Parks & Gangways
- Wood Deck Replacement

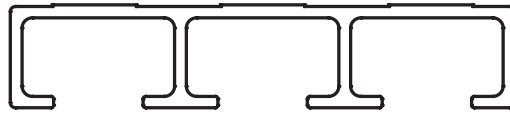
Features and Benefits

- Excellent Traction & Dielectric Strength – Enhances Safety
- Exceptional Service Life – Lowest lifetime cost of ownership
- Corrosion & Rot Resistant – Long-life for corrosive applications
- Environmentally Sustainable – Doesn't leach toxins
- Outperforms Wood & Steel – 80% lighter than steel
- Fast Installation – Lightweight, Easy to carry, drill and cut
- Exceptional Strength – Span further and carry higher loads
- Manufactured in the USA – ISO 9001:2015 compliant facility



Ameri-Board FG Plank: Simple Supported Beam - Single Span

Ameri-Board FG Plank (Part# GR112): 12" wide x 2.5" high - I, IFR, VFR Series



IMPERIAL

$E_b = 4.65 \text{ Msi}$ $G_b = .18 \text{ Msi}$ Characteristic longitudinal compressive strength (F_c) = 68,800 psi
 $I_x = 6.58 \text{ in}^4/\text{ft}$ $S_x = 4.22 \text{ in}^3/\text{ft}$ Characteristic in-plane shear strength (F_{IT}^v) = 4,200 psi
 $A_w = 2.8 \text{ in}^2/\text{ft}$ Weight = 6.14 psf Solid Top Decking



Allowable Concentrated Load Tables

(lb/ft width of panel)

L/D Ratios

Deflection (in)

0.25 0.375

Max. Service Load

Span (in)

180 240 360

0.25 0.375

Max. Service Load

12

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

7840 5880 3920

Allowable Uniform Load Tables

(lb/ft²)

L/D Ratios

Deflection (in)

0.25 0.375

Max. Service Load

Span (in)

180 240 360

0.25 0.375

Max. Service Load

12

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

7840 5880 4849

METRIC

$E_b = 32.1 \text{ Gpa}$ $G_b = 1.26 \text{ Gpa}$ Characteristic longitudinal compressive strength (F_c) = 474 Mpa
 $I_x = 8.98\text{E-}6 \text{ m}^4/\text{m}$ $S_x = 2.27\text{-}4 \text{ m}^3/\text{m}$ Characteristic in-plane shear strength (F_{IT}^v) = 29 Mpa
 $A_w = 5.9\text{E-}3 \text{ m}^2/\text{m}$ Weight = 30.0 kg/m² Solid Top Decking

Allowable Concentrated Load Tables

(kN/m width of panel)

L/D Ratios

Deflection (mm)

6 10

Max. Service Load

Span (m)

180 240 360

6 10

Max. Service Load

0.25

109.8 73.2

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

114.4 114.4

Allowable Uniform Load Tables

(kN/m²)

L/D Ratios

Deflection (mm)

6 10

Max. Service Load

Span (m)

180 240 360

6 10

Max. Service Load

0.25

198.3 131.8

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

228.8 152.6

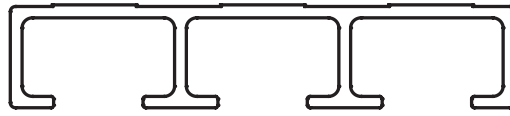
228.8 152.6

228.8 152.6

Maximum allowable load is determined by a 2.5 safety factor in both flexure and 3.0 safety factor in shear.

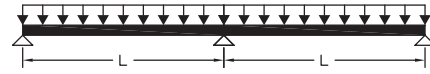
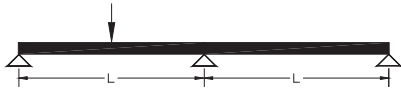
Ameri-Board FG Plank: Simple Supported Beam - Continuous Span

Ameri-Board FG Plank (Part# GR112): 12" wide x 2.5" high - I, IFR, VFR Series



IMPERIAL

$E_b = 4.65 \text{ Msi}$ $G_b = .18 \text{ Msi}$ Characteristic longitudinal compressive strength (F_{lc}) = 68,800 psi
 $I_x = 6.58 \text{ in}^4/\text{ft}$ $S_x = 4.22 \text{ in}^3/\text{ft}$ Characteristic in-plane shear strength (F_{lt}^v) = 4,200 psi
 $A_w = 2.8 \text{ in}^2/\text{ft}$ Weight = 6.14 psf Solid Top Decking



Allowable Concentrated Load Tables

(lb/ft width of panel)

Span (in)	L/D Ratios			Deflection (in)		Max. Service Load
	180	240	360	0.25	0.375	
12	****	****	4973	****	****	6602
18	****	6442	4294	****	****	6602
24	****	5408	3605	****	****	6602
30	5978	4483	2989	****	****	6602
36	4944	3708	2472	6180	****	6602
42	4105	3079	2053	4399	6598	6602
48	3433	2575	1717	3219	4828	6602
54	2896	2172	1448	2413	3620	6602
60	2465	1849	1232	1849	2773	6602
66	2117	1587	1058	1443	2165	6602
72	1833	1375	916	1146	1718	6602
78	1600	1200	800	923	1385	6602
84	1407	1055	703	754	1130	6602
90	1245	934	623	623	934	6358
96	1109	832	555	520	780	5961

Allowable Uniform Load Tables

(lb/ft²)

Span (in)	L/D Ratios			Deflection (in)		Max. Service Load
	180	240	360	0.25	0.375	
12	****	****	****	****	****	6533
18	****	****	****	****	****	4356
24	****	****	****	****	****	3267
30	****	****	2486	****	****	2613
36	****	****	1726	****	****	2178
42	****	1854	1236	****	****	1867
48	****	1364	909	****	****	1633
54	1369	1027	684	1141	****	1452
60	1052	789	526	789	1183	1307
66	823	617	412	561	842	1188
72	655	491	327	409	614	1089
78	529	396	264	305	457	1005
84	432	324	216	232	347	933
90	358	268	179	179	268	871
96	299	224	149	140	210	817

METRIC

$E_b = 32.1 \text{ Gpa}$ $G_b = 1.26 \text{ Gpa}$ Characteristic longitudinal compressive strength (F_{lc}) = 474 Mpa
 $I_x = 8.98\text{E-}6 \text{ m}^4/\text{m}$ $S_x = 2.27\text{-}4 \text{ m}^3/\text{m}$ Characteristic in-plane shear strength (F_{lt}^v) = 29 Mpa
 $A_w = 5.9\text{E-}3 \text{ m}^2/\text{m}$ Weight = 30.0 kg/m² Solid Top Decking

Allowable Concentrated Load Tables

(kN/m width of panel)

Span (m)	L/D Ratios			Deflection (mm)		Max. Service Load
	180	240	360	6	10	
0.25	****	****	75.7	****	****	96.3
0.5	****	89.7	59.8	****	****	96.3
0.75	88.6	66.4	44.3	****	****	96.3
1	65	48.7	32.5	70.1	****	96.3
1.25	48.4	36.3	24.2	41.8	69.7	96.3
1.5	36.9	27.7	18.4	26.6	44.3	96.3
1.75	28.8	21.6	14.4	17.8	29.6	96.3
2	23	17.2	11.5	12.4	20.7	96.3
2.25	18.7	14	9.3	9	15	94.3
2.5	15.5	11.6	7.7	6.7	11.1	84.8
2.75	13	9.7	6.5	5.1	8.5	77.1
3	11.1	8.3	5.5	4	6.6	70.7

Allowable Uniform Load Tables

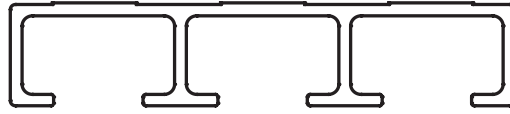
(kN/m²)

Span (m)	L/D Ratios			Deflection (mm)		Max. Service Load
	180	240	360	6	10	
0.25	****	****	****	****	****	381.4
0.5	****	****	****	****	****	190.7
0.75	****	****	122.7	****	****	127.1
1	****	****	68.3	****	****	95.3
1.25	****	61.5	41	70.9	****	76.3
1.5	****	39.3	26.2	37.7	62.9	63.6
1.75	35.2	26.4	17.6	21.7	36.2	54.5
2	24.7	18.5	12.3	13.3	22.2	47.7
2.25	17.9	13.4	8.9	8.6	14.3	42.4
2.5	13.3	10	6.7	5.8	9.6	38.1
2.75	10.2	7.7	5.1	4	6.7	34.7
3	8	6	4	2.9	4.8	31.8

Maximum allowable load is determined by a 2.5 safety factor in both flexure and 3.0 safety factor in shear.

Ameri-Board FG Plank: Simple Supported Beam - Single Span Euro Standards

Ameri-Board FG Plank (Part# GR112): 12" wide x 2.5" high - I, IFR, VFR Series



IMPERIAL

$E_b = 4.65 \text{ Msi}$ $G_b = .18 \text{ Msi}$ Characteristic longitudinal compressive strength (F_{lc}) = 68,800 psi
 $I_x = 6.58 \text{ in}^4/\text{ft}$ $S_x = 4.22 \text{ in}^3/\text{ft}$ Characteristic in-plane shear strength (F_{tr}^v) = 4,200 psi
 $A_w = 2.8 \text{ in}^2/\text{ft}$ Weight = 6.14 psf Solid Top Decking



Allowable Concentrated Load Tables

(lbf per load point)

Span (in)	Load Condition	L/D Ratios			Deflection (in)		Max. Service Load
		240	360	500	0.125	0.25	
		30	3pt	****	****	****	
36	3pt	****	****	****	****	****	738
48	4pt	****	****	****	****	****	738
60	4pt	****	710	511	532	****	738
72	5pt	593	395	284	247	494	738
84	5pt	389	259	187	139	278	738

Allowable Uniform Load Tables

(lb/ft²)

Span (in)	L/D Ratios	Deflection (in)		Max. Service Load			
		240	360		500	0.125	0.25
		30	****		1760	1267	****
36	1736	1158	833	1447	****	1960	
48	848	565	407	530	1059	1470	
60	468	312	225	234	468	1176	
72	283	189	136	118	236	980	
84	183	122	88	65	131	840	

METRIC

$E_b = 32.1 \text{ Gpa}$ $G_b = 1.26 \text{ Gpa}$ Characteristic longitudinal compressive strength (F_{lc}) = 474 Mpa
 $I_x = 8.98\text{E-}6 \text{ m}^4/\text{m}$ $S_x = 2.27\text{E-}4 \text{ m}^3/\text{m}$ Characteristic in-plane shear strength (F_{tr}^v) = 29 Mpa
 $A_w = 5.9\text{E-}3 \text{ m}^2/\text{m}$ Weight = 30.0 kg/m² Solid Top Decking

Allowable Concentrated Load Tables

(kN per load point)

Span (m)	Load Condition	L/D Ratios			Deflection (mm)		Max. Service Load
		240	360	500	3	6	
		0.75	3pt	****	****	****	
1.00	3pt	****	****	****	****	****	3.3
1.25	4pt	****	****	****	****	****	3.3
1.50	4pt	****	****	****	****	****	3.3
1.75	5pt	****	****	****	****	****	3.3
2.00	5pt	****	****	3.2	2.4	****	3.3

Allowable Uniform Load Tables

(kN/m²)

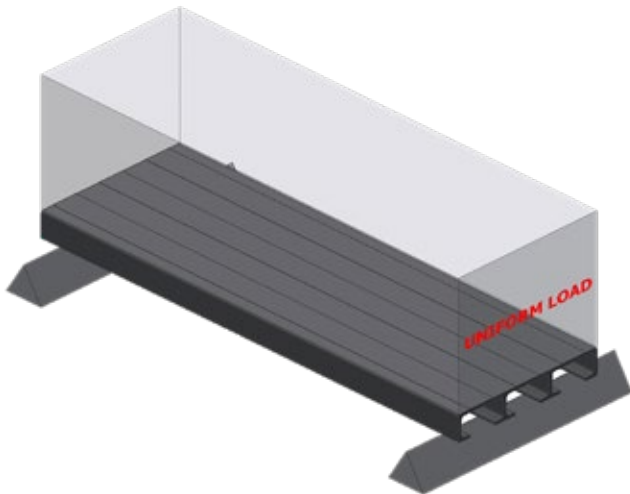
Span (m)	L/D Ratios	Deflection (mm)		Max. Service Load			
		240	360		500	3	6
		0.75	****		87.3	****	****
1.00	67.0	44.6	32.1	****	****	85.8	
1.25	38.0	25.4	18.3	21.9	****	68.6	
1.50	23.4	15.6	11.2	11.2	22.5	57.2	
1.75	15.3	10.2	7.3	6.3	12.6	49.0	
2.00	10.5	7.0	5.1	3.8	7.6	42.9	

Ameri-Board FG Plank - Stairs



Leading Edge Nose Reinforcement

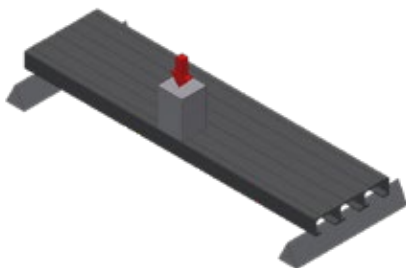
Typical Load Scenario Depicted In Load Charts



Uniform load in lbs/ft² or kN/m² equally distributed over a single span deck.

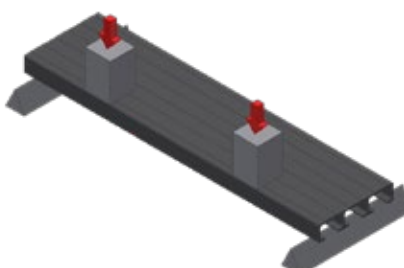
STEP WITH SUPPORTS 47.2" (1200MM)

Load scenario for stair treads with span up to 47.2" (1200mm)



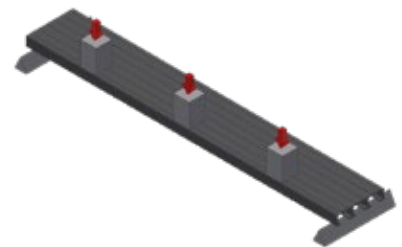
STEP WITH SUPPORTS 63" (1600mm)

Load scenario for stair treads with span > 47.2" (1200mm) up to 63" (1600mm)



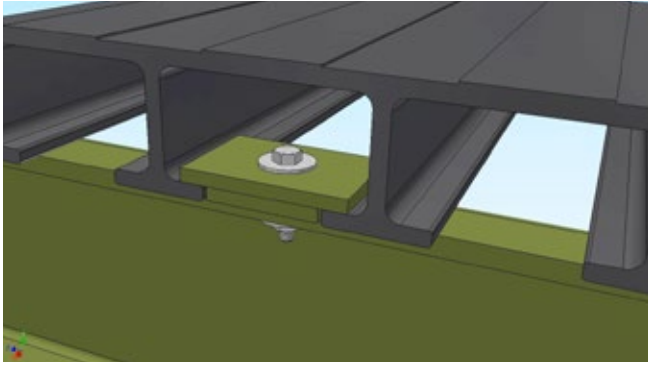
STEP WITH SUPPORTS 78.7" (2000MM)

Load scenario for stair treads with span > 63" (1600mm) up to 78.7" (2000mm)



The "Load Condition" column is representative of the three loading scenarios depicted above. Each imposed load is spread over a 3.9" x 3.9" (100mm x 100mm) area on the treads leading edge. Spans up to 78.7" (2000mm) are loaded at the center of the span. Treads spanning longer than 47.2" (1200mm) have test loads applied at 23.6" (600mm) centers with loads positioned symmetrically above the center of the span.

Deck To Girder Connections

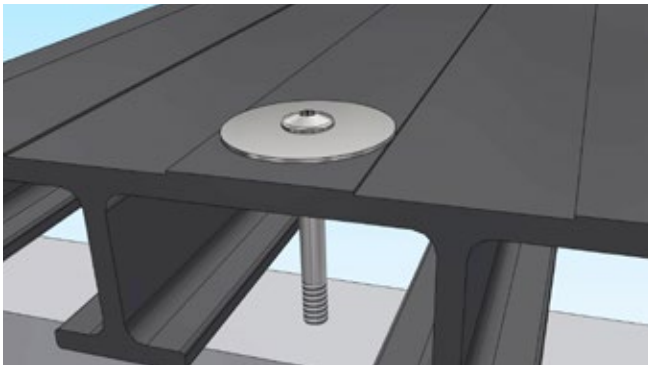


Hidden Clamp Connection

The hidden clamp connection features a fiberglass reinforced polymer (FRP) hold down clamp plate that captures the bottom flanges of the plank and securely holds the plank in position.

Item	Part Number
3" x 2" x 1/4" FRP Flat Plate	FFS040.0563
2" x 2" x 1/4" FRP Flat Plate	FFS040.0564
1/4-20 x 1-1/2" long Hex Bolt	FAB605
1/4-20 Hex Nut	FAB606
1/4" Flat Washer (2)	FAB220
1/4" Spring Lock Washer	FAB607

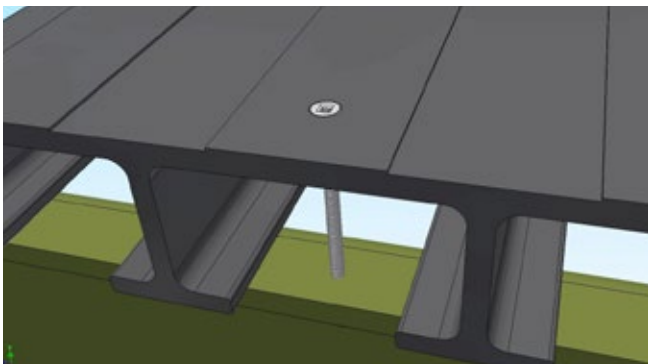
All bolts, nuts, screws and washers are 316SS.



Deck Screw With Washer

The Deck screw with washer connection permits the contractor to securely fasten the deck from the top surface. This connection technique is ideal for commercial applications in which the hardware does not create a visual issue and uplift loads are substantial.

Item	Part Number
5" x 0.32" Button Head Deck Screw (Ameri-Screw 5.0) - Zinc Clear Trivalent Coating	CLP049
2" O.D. Flat Washer - 316SS	CLP050

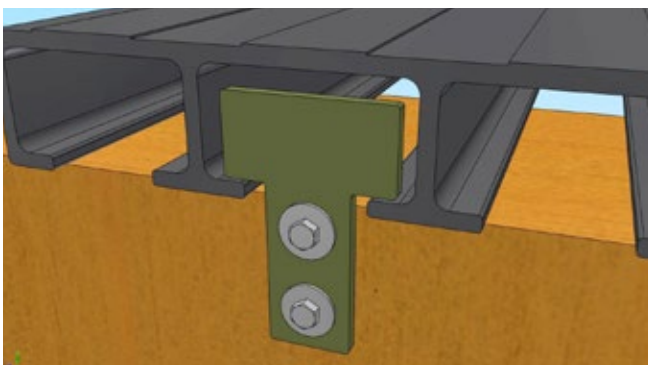


Countersunk Self-Drilling Screw

The countersunk method is ideal for quick installations with limited visual of the hardware. This method is ideal for pedestrian bridges and walkways in which uplift loads are minimal.

Note: CCG recommends two fasteners per plank per connection as a minimum.

Item	Part Number
1/4" x 4" Self-Drilling Screw - Phillips Drive Epoxy Finish 410 Stainless Steel	FAB608



FRP Clip Screwed to Sill Or Support Channel

The clip connection is ideal for blind connections in which you can install the decking with underside access.

Item	Part Number
1/4" FRP Plate	FFS040.0550
1/4" x 1.5" long Hex Head Lag Screw	FAB609
1/4" Flat Washer	FAB220

All bolts, nuts, screws and washers are 316SS.

Specifying

1.0 SCOPE

This specification depicts the minimum mechanical, physical and quality standards for the Fiberglass (FG) Ameri-Board FG Plank.

2.0 APPLICABLE DOCUMENTS

The latest revisions of the following documents in effect on the date of invitation apply to the extent specified herein, except in the case of specifically dated documents, in which case those revisions shall apply:

- ASTM D3917, Standard Specification for Dimensional Tolerance of Thermosetting Glass-Reinforced Plastic Pultruded Shapes
- ASTM D4385, Standard Practice for Classifying Visual Defects in Thermosetting Reinforced Plastic Pultruded Products
- ASTM D7290, Standard Practice for Evaluating Material Property Characteristic Values for Polymeric Composites for Civil Engineering Structural Applications

3.0 GENERAL

Pultruded FG Planks shall be manufactured by a manufacturer that holds an ISO 9001:2015 certificate.

The FG Planks shall be manufactured with commercial grade E or Ecr fiberglass and thermoset resins and shall meet or exceed the manufactures published properties.

The strength and stiffness ratings shall be established by full section testing to determine the apparent flexural and shear strength and the modulus of elasticity.

4.0 MINIMUM MECHANICAL AND PHYSICAL PROPERTIES

Minimum Full Section Modulus of Elasticity: 4.65 Msi

Characteristic Bending Strength per ASTM D7290: 68,800 psi (Full Section)

Characteristic In-Plane Shear Strength per ASTM D7290: 4,200 psi (Full Section)

Fire ratings when applicable: UL 94 (V0) and ASTM E84 Class A.

5.0 VISUAL REQUIREMENTS

The FG Planks shall be manufactured and inspected per the visual standard ASTM D4385.

6.0 DIMENSIONAL REQUIREMENTS

The FG Planks shall be manufactured and dimensionally inspected per the dimensional requirements as set forth in ASTM D3917.

7.0 WEATHERING UV PROTECTION

The FG Planks shall be encompassed with a 10 mil thick thermoplastic polyester surface veil to protect the fiberglass reinforcements from fiber blooming.

8.0 QUALITY CONTROL

Manufacturer shall inspect the FG Planks as detailed in their ISO 9001:2015 requirements.

9.0 MATERIAL CONNECTION

Sub-structure design engineering assistance available utilizing structural plastic lumber through American Plastic Lumber.



Choose Creative Composites Group for Comprehensive Project Support

Your Single Source for Innovatively Engineered Planking and Decking Solutions Using Fiberglass (FG) Composites

Advance your products and projects beyond the limitations of traditional planking materials by leveraging the combined strength of Creative Composites Group. We are a leader in technical innovation that is backed by the industry's most comprehensive FRP manufacturing group for infrastructure.

As Creative Composites Group, we can help you engineer and manufacture Ameri-Board planks to meet your current requirements and the needs of future generations.

We offer comprehensive engineering, design and consultation for plank components. Our manufacturing capabilities include the broadest range of design and build solutions to meet your unique criteria. That's possible only with our proven engineering processes, end-to-end collaboration, service and support resources. Since Fiberglass composites last longer than conventional materials they often have a lower lifetime cost when you consider longer service life and low to no maintenance costs.

Discover Your Custom Engineered FRP Planking and Decking Provider

Creative Composites Group is committed to becoming a trusted business partner who is keenly interested in your project's success. Creative Composites Group works alongside your team, from owners to design engineers and contractors, to help you develop and customized pultruded FG solution that meets the most demanding structural requirements and environmental conditions.

*Contact us for your next engineered composite planking or decking project.
We'd be thrilled to discuss it with you.*

CreativeCompositesGroup.com



Creative Composites Group

888-274-7855

214 Industrial Lane
Alum Bank, PA 15521

CreativeCompositesGroup.com

DLR041922R1
©2022 Creative Composites Group
All Rights Reserved Worldwide