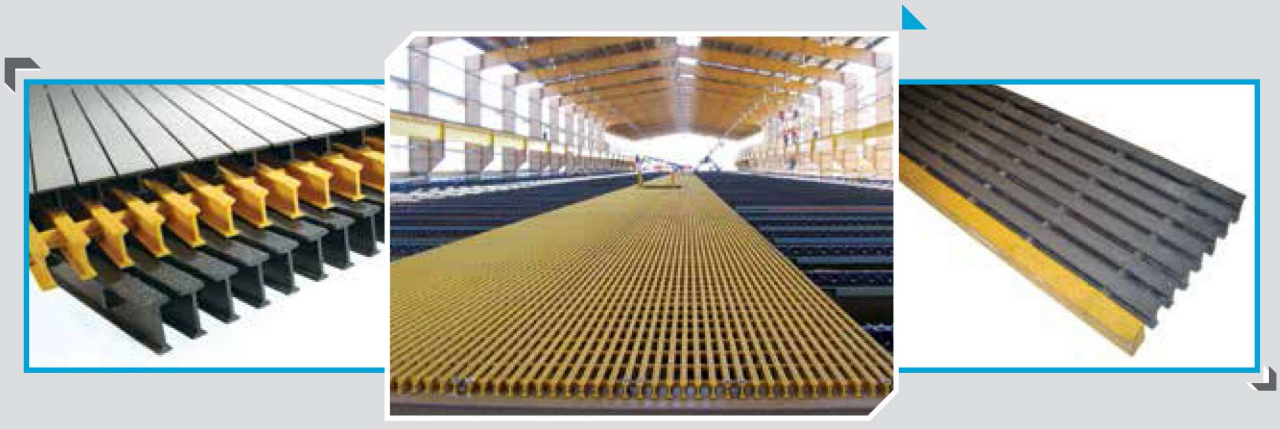
Fiberglass Pultruded Grating

ZeAll

FRP Grating Master

www.gratingfrp.com

HIGH PERFORMANCE **COMPOSITE SOLUTIONS**





Pultruded Products

Introduction

Combining corrosion resistance, long life and a low maintenance design, Safe-T-Span® pultruded grating is superior to conventional metallic gratings. This advanced grating is manufactured with a recessed tie bar configuration and is lightweight and easy to fabricate. Savings on labor and equipment often make the total installed cost of Safe-T-Span grating comparable to that of steel. This advanced pultruded grating is designed for use in a wide range of industrial applications that require strength and corrosion resistance. Manufactured with a high percentage of glass within the laminate, pultruded grating provides durability, extremely high unidirectional strength and stiffness. Due to its exceptional stiffness, it can be used with confidence where wide support spans are required. For most applications where it is used to replace steel grating, Safe-T-Span industrial grating rarely requires additional support. Combining its low cost of installation with low maintenance and long life, Safe-T-Span offers a life cycle cost that is significantly lower than that of its metal counterpart.

The Safe-T-Span line includes High Load Capacity (HI) grating for up to H20 vehicular loads, industrial grating for standard industrial loads and pedestrian grating for foot traffic. Specially designed gratings for barefoot traffic in the recreation industry are available in the Aqua Grate® line and several of the pultruded series available meet ADA guidelines. Another pultruded product, Dynadeck® interlocking flooring, is available to provide a solid-top flooring.

For additioinal niche products, check out ZeAllGrate website *www.gratingfrp.com* under Pultruded Products for custom Pultruded market gratings.

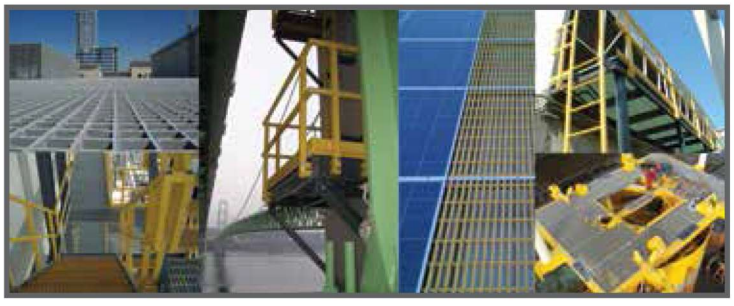
Safe Span Grating Resin Systems

ISOFR: Isophthalic polyester resin formulation with a low flame spread rating of 25 or less designed for applications where ther is moderate exposure to corrosive elements. (Detailed test report available upon requrest)

VEFR: Vinyl ester system with a flame spread of 25 or less for dependable resistance to both acidic and alkaline environments .

PHENOLIC: A Coast Guard approved flame-resistant phenolic resin with an extremely low flame spread of 10 and a smoke index of 400(unpainted); flame spread of 15 and a smoke index of 450(painted, UV coating) - designed primarily for the offshore industry. (Coast Guard approved for level 2 & 3 performance criteria detail available upone request)

ZEALL GRATE MARKETS



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

ZeAll Grate Benefits

Why use FRP?



Corrosion Resistant: Fibergrate® pultruded fiberglass products are known for their ability to provide corrosion resistance in the harshest environments and chemical exposures.



Slip Resistant: The integrally applied grit surfaces of Fibergrate pultruded products have unmatched slip resistance for improved worker safety.



Low Maintenance: The corrosion resistant properties of FRP grating and other products reduce or eliminate the need for sandblasting, scraping and painting. Products are also easily cleaned with a high pressure washer.



Fire Retardant: Most Fibergrate products are engineered to have a flame spread rating of 25 or less, as tested in accordance with ASTM E-84, and meets the self-extinguishing requirements of ASTM D-635.



High Strength to Weight Ratio: Less than one-half the weight of steel grating, allowing easy removal for access below floor level and installation with no heavy equipment and less manpower.



Electrically & Thermally Non Conductive: Fiberglass is electrically non conductive for safety and has low thermal conductivity which results in a more comfortable product when physical contact occurs.



Low Install Cost: Due to ease of fabrication and light weight, FRP pultruded grating eliminates the need for heavy lifting equipment.



Long Service Life: Fiberglass products provide outstanding durability and corrosion resistance in demanding applications, therefore providing improved product life over traditional materials.



UV Protection: UV inhibitors in the resin matrix, a synthetic surfacing veil, and grit top surface provide optimum protection from the structural effects of UV weathering. *(Phenolic resin grating does not have the UV inhibitor or veil and therefore must be coated for UV protection.)*



NSF® Standard 61-Certified: Fibergrate is now able to offer Safe-T-Span® pultruded gratings assembled from NSF Standard 61-Certified components. These pultruded gratings complement the complete line of NSF Standard 61-Certified Fibergrate® molded gratings, Dynaform® fiberglass structural shapes, and Dynarail® FRP guardrail, handrail and ladder systems. NSF Standard 61-Certified molded gratings are available in all Fibergrate® molded grating mesh patterns and thicknesses, except Ecograte® and 4 x 12 Micro-Mesh® panels.

Why Not

Heavy Metal
The EPA, OSHA and other regulatory agencies created to protect our lives and our natural resources have increased legislation to control heavy metals such as lead, chrome, cadmium and other metals in all products where exposure is a health threat. Nantong ZeAll New Materials Co.,Ltd. supports this strengthened legislation and has, for more than 20 years, voluntarily tested for heavy metals in our products and minimized or eliminated heavy metals from our products.

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Grating Selection and Accessories

Safe Span Pultruded Industrial Series Grating

6" Tie Bar Spacing Standard										
Series	Panel Depth	Load Bar Spacing	Stocked Sizes		Load Bars/Ft.	Wt/ Sq. Ft.	Open Area	Resin/Color		
			Width	Length				ISOFR	VEFR	PHENOLIC*
I6010	1"	1-1/2"	3', 4'	8', 10', 12', 20', 24'	8	2.7 lbs	60%	Yellow	Dk Gray	—
I5010	1"	1.2"	3', 4'	8', 10', 12', 20', 24'	10	3.3 lbs	50%	Yellow	Dk Gray	—
I4010 ♿	1"	1"	3', 4'	8', 10', 12', 20', 24'	12	3.8 lbs	40%	Yellow	Dk Gray	—
I6015	1-1/2"	1-1/2"	3', 4'	8', 10', 12', 20', 24'	8	3.2 lbs	60%	Yellow	Dk Gray	Brown*
I5015	1-1/2"	1.2"	3', 4'	8', 10', 12', 20', 24'	10	3.8 lbs	50%	Yellow	Dk Gray	—
I4015 ♿	1-1/2"	1"	3', 4'	8', 10', 12', 20', 24'	12	4.6 lbs	40%	Yellow	Dk Gray	Brown*
T5020	2"	2"	3', 4'	8', 10', 12', 20', 24'	6	3.4 lbs	50%	Yellow	Dk Gray	—
T3320 ♿	2"	1-1/2"	3', 4'	8', 10', 12', 20', 24'	8	3.7 lbs	33%	Yellow	Dk Gray	—

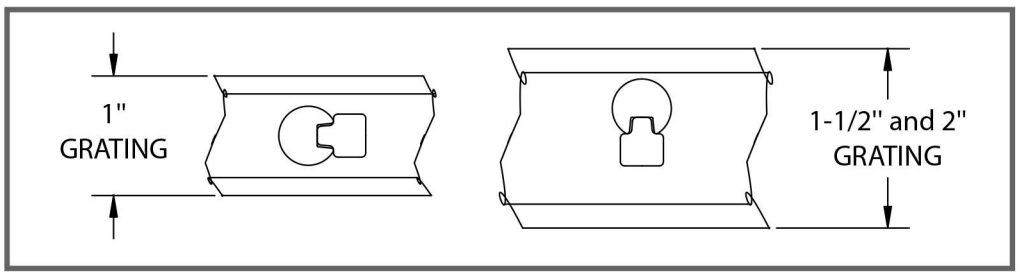
**Phenolic Grating also available with UV coating - Awning Red color*

Safe Span & Grate Pultruded Pedestrian Series Grating

6" Tie Bar Spacing Standard										
Series	Panel Depth	Load Bar Spacing	Stocked Sizes		Load Bars/Ft.	Wt/ Sq. Ft.	Open Area	Resin/Color		
			Width	Length				ISOFR	VEFR	PHENOLIC*
T3810	1"	2.4"	3', 4'	8', 10', 12', 20', 24'	5	1.9 lbs	38%	Dk Gray	Dk Gray	—
T2510 ♿	1"	2"	3', 4'	8', 10', 12', 20', 24'	6	2.5 lbs	25%	Dk Gray	Dk Gray	—
T1210 ♿	1"	1.7"	3', 4'	8', 10', 12', 20', 24'	7	2.7 lbs	12%	Dk Gray*	Dk Gray*	—
T3815	1-1/2"	2.4"	3', 4'	8', 10', 12', 20', 24'	5	2.7 lbs	38%	Dk Gray	Dk Gray	—
T2515 ♿	1-1/2"	2"	3', 4'	8', 10', 12', 20', 24'	6	2.9 lbs	25%	Dk Gray	Dk Gray	—
T1215 ♿	1-1/2"	1.7"	3', 4'	8', 10', 12', 20', 24'	7	3.2 lbs	12%	Dk Gray*	Dk Gray*	—

*(5' widths and 8', 12' and 24' lengths are available with extended lead times.) For load/deflection information on pultruded grating, see tables in this brochure. *Top surface of grating is light gray in color; bottom of grating is dark gray.*

Tie Bar Representation

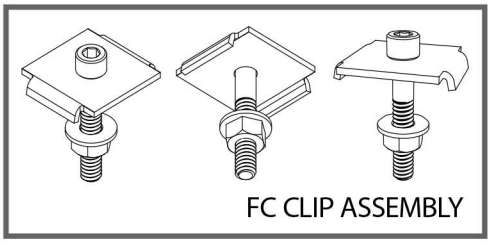




Grating Selection & Accessories

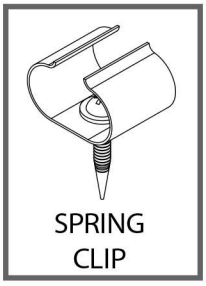
Clip Assemblies

ZeAllgrate's newly designed FC Hold Down Clip Assembly offers an easy and more cost effective solution for installing pultruded grating. Type FC Hold Down Clips secure grating below the walking surface. *(FC-1 for I4010, I40125 & 4015 grating • FC-2 for I5010 & I5015 grating • FC-3 for I6010, I60125, I6015 & T3320 grating • FC-4 for T1210 and T1215 grating • FC-5 for T2510, T2515 & T5020 grating plus WT1810 & WT1815 specialty grating • FC-6 for T3810 & T3815 grating • FC-7 for WT3510 & WT3515 specialty grating)*

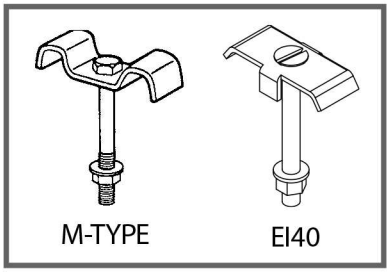

FC CLIP ASSEMBLY

Fibergrate's Type RT and RI Hold Down Clip Assemblies of Type 316 stainless steel are still available for special order.

The T12 Spring Clip is designed for specialty applications where grating needs to be removed without removing the hardware. The grating is held securely in place below the surface, but can be released with a firm upward force. *(For the T12 Pultruded Grating Series)*


SPRING CLIP

ZeAllgrate also offers Type M, W and E Hold Down Clip Assemblies for many types of pultruded grating. *(EI40 for I4010 and I4015 grating • MI60 for I6010 and I6015 grating • MT5020 for T5020 grating • MT3320 for T3320 grating • MT3810 for T3810 grating • MT3815 for T3815 grating • MHI47 for HI47 grating • MHI58 for HI58 grating)*


M-TYPE EI40

Coating/Sealing Products:

To maintain corrosion resistance and structural integrity, Fibergrate offers epoxy clear coating in a spray can*, for protecting the exposed ends of cut panels and other components.

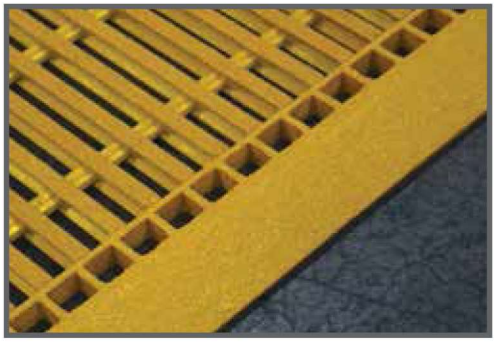
**1/2 pint sealing kits are still available with minimum order requirements*

Grating Edge Ramps

Fibergrate's new standard grating edge ramps can be used with 1", 1-1/2", and 2" deep Safe-T-Span® pultruded grating. These grating edge ramps are offered in dark gray or yellow and have a quartz grit top surface. Grating edge ramps are stocked in 12' lengths; however, they can be easily fabricated to meet any length requirements. *For additional details, please visit our website at:*

www.gratingfrp.com

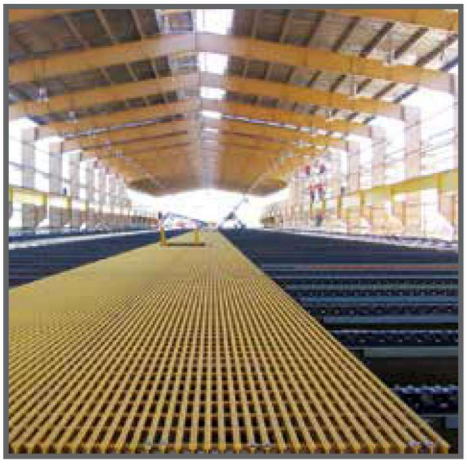

Safe Span pultruded grating with edge ramp


Safe Span pultruded grating with edge ramp

Safe Span Industrial Grating Details



I4010 & I6010 Grating



Copper Mining Facility



Offshore Oil & Gas Platform

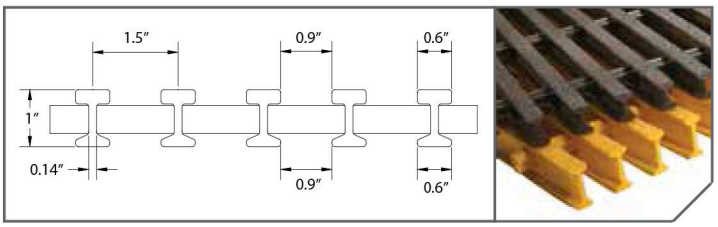
Safe Span industrial grating is available in 1", 1-1/4", and 1-1/2" depths in an I-bar configuration with 40%, 50% and 60% open areas. 2" depth T-bar configuration with 33% or 50% open area is also available for applications which require wider spans or lower deflections. *For details and load charts for 1-1/4" depth products, please visit our website*

Grating Details

Refer to chart on page 4 for Grating Selection.

1" Deep I6010

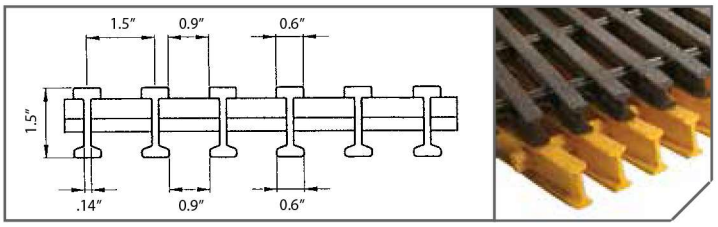
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
8	1"	60%	1-1/2"	2.7 psf



Section Properties per Ft of Width: A = 2.64 IN^2 I = 0.33 IN^4 S = 0.63 IN^3
Average EI = 1,700,000 lb - in^2 (SPAN ≥ 24")

1-1/2" Deep I6015

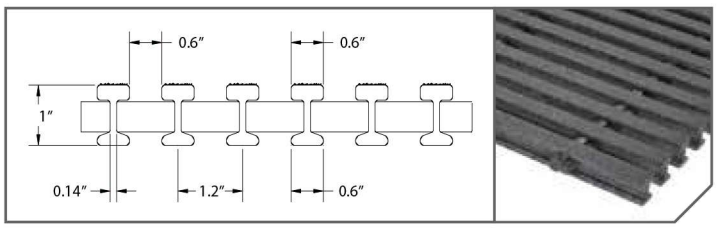
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
8	1-1/2"	60%	1-1/2"	3.2 psf



Section Properties per Ft of Width: A = 3.2 IN^2 I = 0.94 IN^4 S = 1.2 IN^3
Average EI = 4,600,000 lb - in^2 (SPAN ≥ 24")

1" Deep I5010

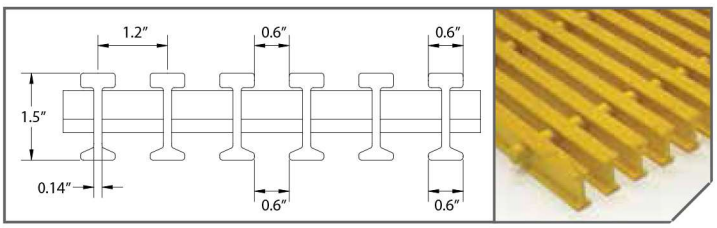
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
10	1"	50%	1.2"	3.3 psf



Section Properties per Ft of Width: A = 3.3 IN^2 I = 0.41 IN^4 S = 0.79 IN^3
Average EI = 2,100,000 lb - in^2 (SPAN ≥ 24")

1-1/2" Deep I5015

# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
10	1-1/2"	50%	1.2"	3.8 psf

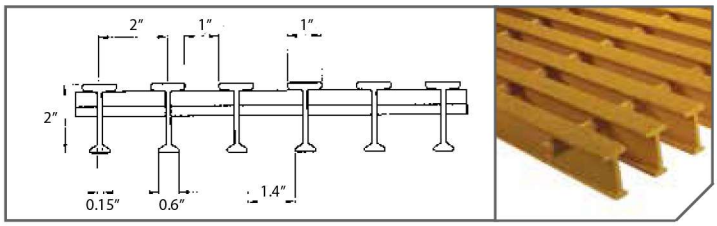


Section Properties per Ft of Width: A = 4 IN^2 I = 1.17 IN^4 S = 1.65 IN^3
Average EI = 5,700,000 lb - in^2 (SPAN ≥ 24")

Safe Span Industrial Grating Details

2" Deep T5020

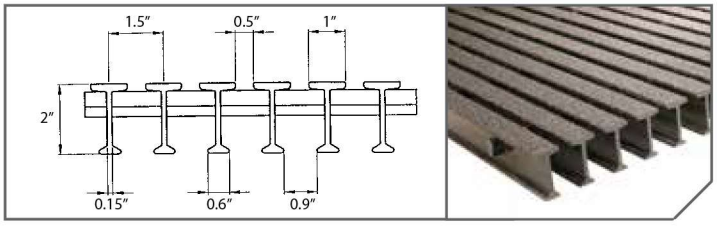
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
6	2"	50%	2"	3.4 psf



Section Properties per Ft of Width: A=3.2 IN² I=1.68 IN⁴ St=1.96 IN³ Sb=1.47 IN³
Average EI = 7,600,000 lb - in² (SPAN ≥ 24")

2" Deep T3320 (ADA Compliant)

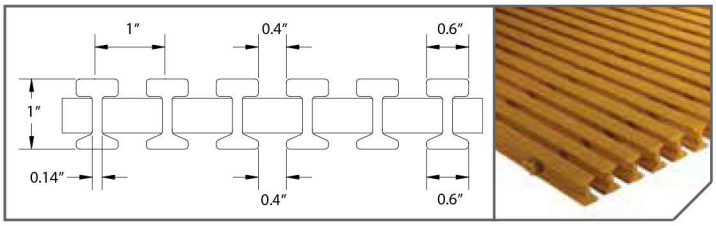
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
8	2"	33%	1-1/2"	3.7 psf



Section Properties per Ft of Width: A=4.28 IN² I=2.24 IN⁴ St=2.61 IN³ Sb=1.96 IN³
Average EI = 9,200,000 lb - in² (SPAN ≥ 24")

1" Deep I4010 (ADA Compliant)

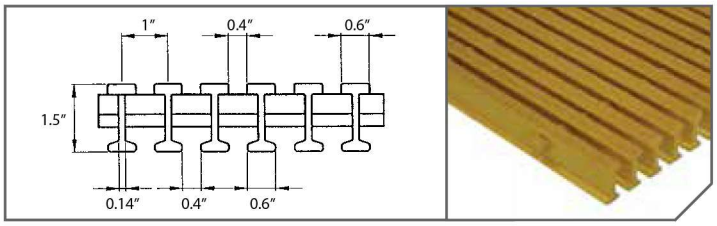
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
12	1"	40%	1"	3.8 psf



Section Properties per Ft of Width: A = 3.96 IN² I = 0.5 IN⁴ S = 0.95 IN³
Average EI = 2,500,000 lb - in² (SPAN ≥ 24")

1-1/2" Deep I4015 (ADA Compliant)

# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
12	1-1/2"	40%	1"	4.6 psf



Section Properties per Ft of Width: A = 4.8 IN² I = 1.41 IN⁴ S = 1.8 IN³
Average EI = 7,000,000 lb - in² (SPAN ≥ 24")

Safe Span High Load Capacity Grating

High Load Capacity (HI) pultruded grating is yet another product in the arsenal of engineered fiberglass reinforced plastic (FRP) solutions by Fibergrate. While capitalizing on some of the traditional benefits of pultruded grating products - high strength, corrosion resistance, slip resistance, fire retardancy, non conductivity and low maintenance - this pultruded FRP product has been engineered to carry the forklift and tractor trailer loads that traditional pultruded FRP grating products are unable to support.



- 37%, 47%, and 58% open surface area
- Available in 1", 1-1/2", 2", 2-1/2", and 3" depths
- Rated for up to H20 loads in all five depths
- Flame spread rating of 25 or less (when tested in accordance with ASTM E-84) and a Class 1 Fire Rating
- HI37 Grating is ADA Compliant

- Standard panels consist of:
  - Fire retardant vinyl ester resin system
  - Dark gray in color
  - Aluminum oxide grit top surface

Each HI grating is specially engineered to meet specific requirements. Contact the ZeAll grate engineering team to determine which grating offers the best solution for your high load needs. (Applications with traffic perpendicular to trench or with turning wheel loads, contact Fibergrate engineering for design assistance.)

High Load Capacity Grating Details

Allowable Spans for Vehicular Loads

	Wheel Load (lb) (1/2 Axle Load + 30% Impact)	Load Distribution		Allowable Span[2,3]					Load Distribution		Allowable Span[2,3]					Load Distribution		Allowable Span[2,3]				
		Parallel to Axle (1)	Perpendicular to Axle	HI3710	HI3715	HI3720	HI3725	HI3730	Parallel to Axle (1)	Perpendicular to Axle	HI4710	HI4715	HI4720	HI4725	HI4730	Parallel to Axle (1)	Perpendicular to Axle	HI5810	HI5815	HI5820	HI5825	HI5830
AASHTO H-25 Truck[4] 40,000 lb Axle Load Dual Wheels	26,000	25" + 2"	25"	1'-5"	2'-0"	2'-5"	2'-11"	3'-6"	25" + 2-3/8"	25"	1'-4"	1'-11"	1'-4"	2'-9"	3'-4"	25" + 3"	25"	1'-3"	1'-10"	2'-3"	2'-7"	3'-2"
AASHTO H-20 Truck[4] 32,000 lb Axle Load Dual Wheels	20,800	20" + 2"	20"	1'-4"	1'-11"	2'-5"	2'-10"	3'-5"	20" + 2-3/8"	20"	1'-3"	1'-10"	2'-3"	2'-9"	3'-3"	20" + 3"	20"	1'-2"	1'-9"	2'-2"	2'-7"	3'-1"
AASHTO H-15 Truck[4] 24,000 lb Axle Load Dual Wheels	15,600	15" + 2"	15"	1'-3"	1'-10"	2'-4"	2'-10"	3'-5"	15" + 2-3/8"	15"	1'-2"	1'-9"	2'-3"	2'-8"	3'-3"	15" + 3"	15"	1'-1"	1'-8"	2'-1"	2'-6"	3'-1"
AASHTO H-10 Truck[4] 16,000 lb Axle Load	10,400	10" + 2"	10"	1'-1"	1'-9"	2'-4"	2'-10"	3'-6"	10" + 2-3/8"	10"	1'-0"	1'-8"	2'-3"	2'-8"	3'-4"	10" + 3"	10"	0'-11"	1'-7"	2'-1"	2'-6"	3'-1"
AASHTO H-5 Truck[4] 8,000 lb Axle Load	5,200	5" + 2"	5"	1'-0"	1'-10"	2'-5"	2'-11"	3'-7"	5" + 2-3/8"	5"	0'-11"	1'-9"	2'-4"	2'-10"	3'-6"	5" + 3"	5"	0'-10"	1'-8"	2'-2"	2'-8"	3'-4"
Passenger Vehicles[5] **6,322 lb Vehicle** **3,578 lb Load** **60% Drive Axle Load**	3,861	9" + 2"	9"	1'-5"	2'-2"	2'-10"	3'-6"	4'-3"	9" + 2-3/8"	9"	1'-4"	2'-1"	2'-11"	1'-5"	4'-1"	9" + 3"	9"	1'-3"	2'-0"	2'-7"	3'-2"	3'-10"
5 Ton Capacity Forklift[5] 14,400 lb Vehicle 24,400 lb Total Load 85% Drive Axle Load	13,480	11" + 2"	11"	1'-0"	1'-8"	2'-2"	2'-8"	3'-3"	11" + 2-3/8"	11"	0'-11"	1'-7"	2'-1"	2'-7"	3'-1"	11" + 3"	11"	0'-10"	1'-5"	2'-0"	2'-5"	2'-11"
3 Ton Capacity Forklift[5] 9,800 lb Vehicle 15,800 lb Total Load 85% Drive Axle Load	8,730	7" + 2"	7"	0'-11"	1'-8"	2'-5"	2'-9"	3'-4"	7" + 2-3/8"	7"	0'-10"	1'-7"	2'-1"	2'-7"	3'-2"	7" + 3"	7"	0'-9"	1'-4"	2'-0"	2'-5"	3'-0"
1 Ton Capacity Forklift[5] 4,200 lb Vehicle 6,200 lb Total Load 85% Drive Axle Load	3,425	4" + 2"	4"	1'-2"	2'-0"	2'-8"	3'-3"	3'-11"	4" + 2-3/8"	4"	1'-1"	1'-11"	2'-6"	3'-1"	3'-10"	4" + 3"	4"	1'-0"	1'-10"	2'-5"	3'-0"	3'-8"

NOTES:

1. Load is carried by the grating load bars immediately under wheel + two additional load bars, one on each side of wheel.
2. Allowable Span is based on a 0.25" maximum deflection and a Factor of Safety of 3.0. Other criteria may be required by certain construction codes. Check code requirements to determine design critieria.
3. Allowable span is strongly dependent on wheel width and vehicle weight/load capacity. If your application varies from the values given in this table, contact ZeAllgrate Engineering for assistance.
4. Load based on Standard Truck Load as defined in AASHTO Standard Specifications for Highway Bridges, 17th Ed. This does not imply that the allowable span given meets the deflection requirements of this specification.
5. Loads based on load criteria from NAAMM Metal Bar Grating Engineering Design Manual MBG 534-12

- Long Span Walkways
- Ramps and Loading Docks
- Trench Covers
- Flooring/Platforms
- Storage Areas
- Assembly Lines



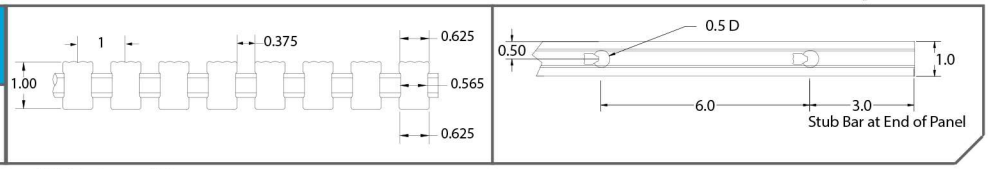
High Load Capacity Grating Details

Grating Details

HI37 Series

1" Deep HI3710

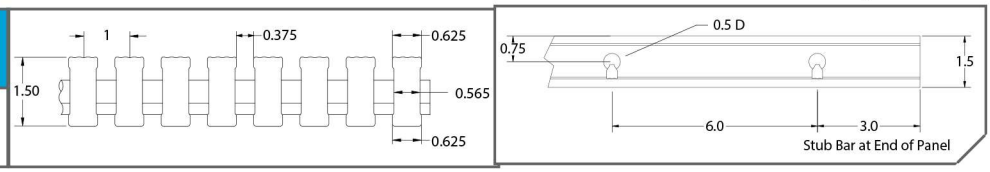
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1"	37%	1"	6.5 lb/ft²



Section Properties per Ft of Width: A=7.08 IN² I=0.59 IN⁴/FT S=1.19 IN³

1-1/2" Deep HI3715

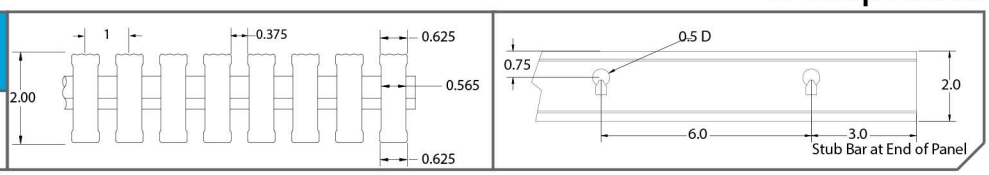
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1-1/2"	37%	1"	9.6 lb/ft²



Section Properties per Ft of Width: A=10.44 IN² I=1.99 IN⁴/FT S=2.66 IN³/FT

2" Deep HI3720

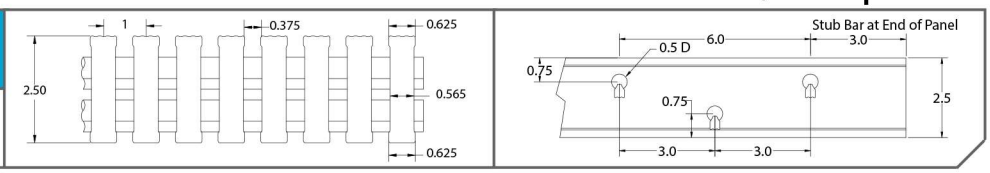
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2"	37%	1"	13 lb/ft²



Section Properties per Ft of Width: A=13.82 IN² I=4.7 IN⁴/FT S=4.7 IN³/FT

2-1/2" Deep HI3725

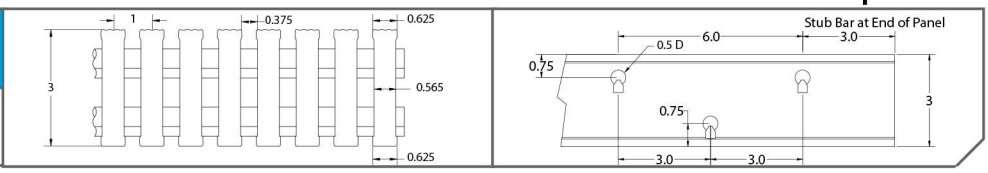
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2-1/2"	37%	1"	14.8 lb/ft²



Section Properties per Ft of Width: A=17.22 IN² I=9.13 IN⁴/FT S=7.3 IN³/FT

3" Deep HI3730

Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
3"	37%	1"	17.7 lb/ft²



Section Properties per Ft of Width: A=20.59 IN² I=15.70 IN⁴/FT S=10.46 IN³/FT

NOTES:

1. All pultruded grating panels are assembled to size from stocked bar lengths of 20' and 24' to minimize waste and cost. Maximum panel widths (tie bar length) are 4' nominal.
2. Available panel sizes are dependent upon application requirements and individual panel weight considerations because this is a very heavy product.

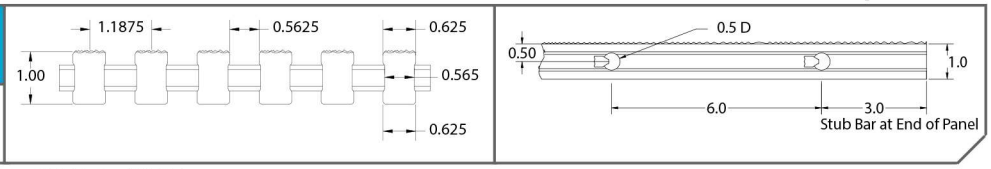
High Load Capacity Grating Details

Grating Details

HI47 Series

1" Deep HI4710

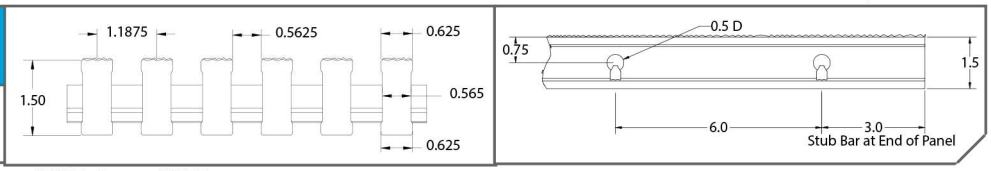
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1"	47%	1.1875"	5.5 lb/ft²



Section Properties per Ft of Width: A=5.96 IN² I=0.51 IN⁴/FT S=1 IN³/FT

1-1/2" Deep HI4715

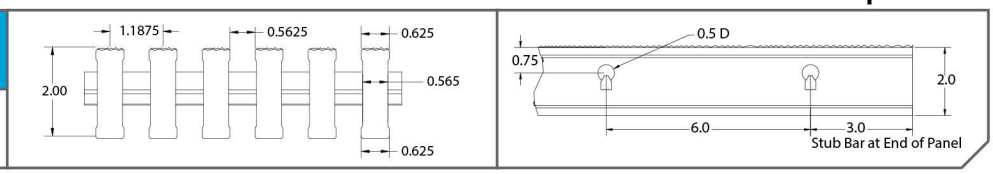
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1-1/2"	47%	1.1875"	8 lb/ft²



Section Properties per Ft of Width: A=8.79 IN² I=1.72 IN⁴/FT S=2.26 IN³/FT

2" Deep HI4720

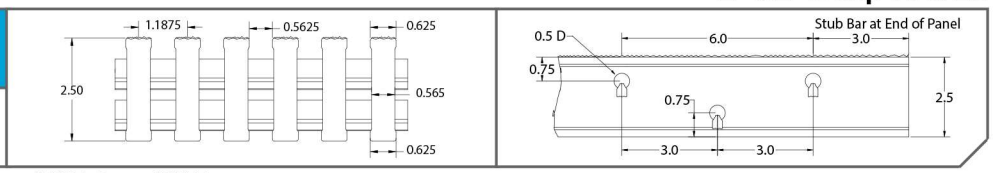
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2"	47%	1.1875"	10.9 lb/ft²



Section Properties per Ft of Width: A=11.64 IN² I=3.96 IN⁴/FT S=3.96 IN³/FT

2-1/2" Deep HI4725

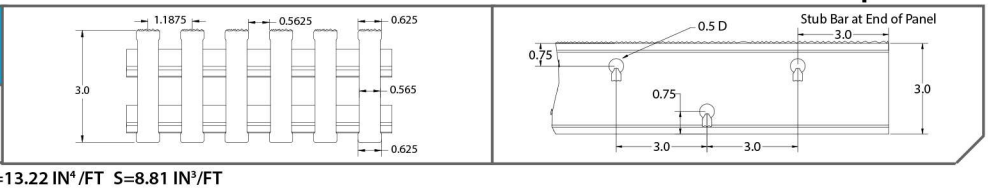
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2-1/2"	47%	1.1875"	12.3 lb/ft²



Section Properties per Ft of Width: A=14.5 IN² I=7.96 IN⁴/FT S=6.15 IN³/FT

3" Deep HI4730

Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
3"	47%	1.1875"	14.7 lb/ft²



Section Properties per Ft of Width: A=17.34 IN² I=13.22 IN⁴/FT S=8.81 IN³/FT

NOTES:

1. All pultruded grating panels are assembled to size from stocked bar lengths of 20' and 24' to minimize waste and cost. Maximum panel widths (tie bar length) are 4' nominal.
2. Available panel sizes are dependent upon application requirements and individual panel weight considerations because this is a very heavy product.

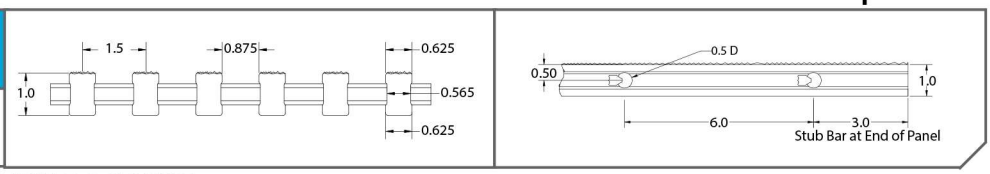
High Load Capacity Grating Details

Grating Details

HI58 Series

1" Deep HI5810

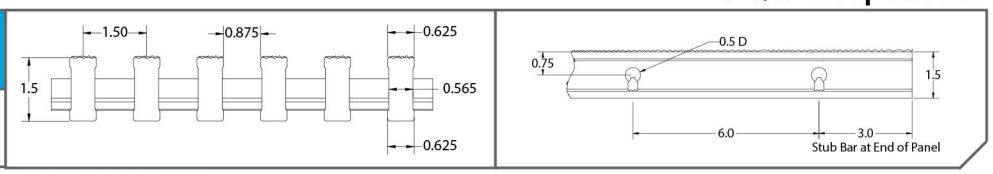
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1"	58%	1.5"	4.3 lb/ft²



Section Properties per Ft of Width: A=4.72 IN² I=0.4 IN⁴/FT S=0.78 IN³/FT

1-1/2" Deep HI5815

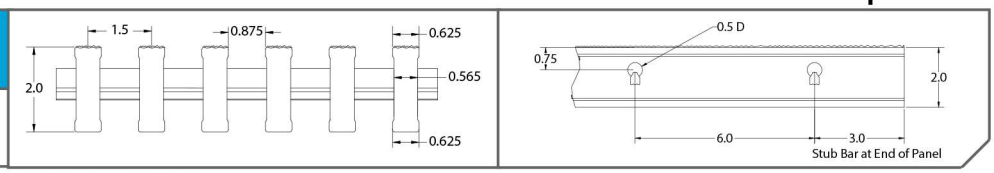
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
1-1/2"	58%	1.5"	6.5 lb/ft²



Section Properties per Ft of Width: A=6.96 IN² I=1.36 IN⁴/FT S=1.79 IN³/FT

2" Deep HI5820

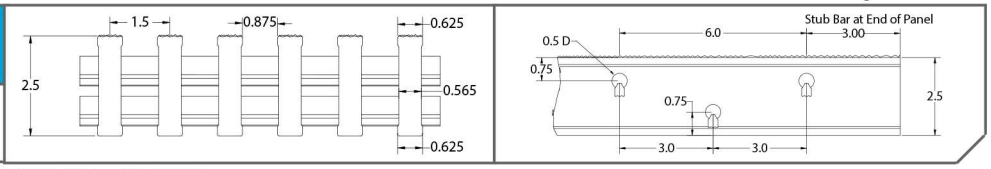
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2"	58%	1.5"	8.7 lb/ft²



Section Properties per Ft of Width: A=9.2 IN² I=3.12 IN⁴/FT S=3.12 IN³/FT

2-1/2" Deep HI5825

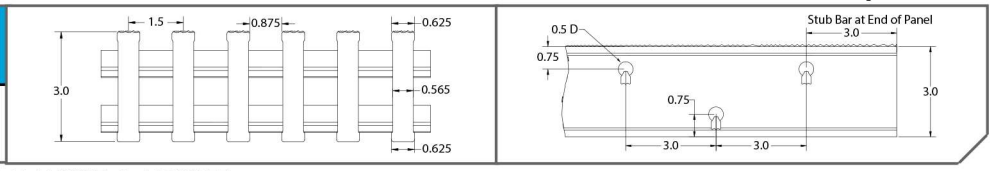
Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
2-1/2"	58%	1.5"	10 lb/ft²



Section Properties per Ft of Width: A=11.5 IN² I=6.09 IN⁴/FT S=4.87 IN³/FT

3" Deep HI5830

Load Bar Depth	Open Area	Load Bar Centers	Approx. Weight
3"	58%	1.5"	12 lb/ft²

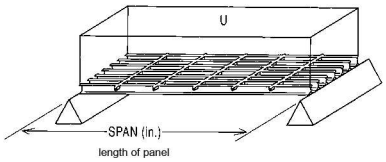


Section Properties per Ft of Width: A=13.73 IN² I=10.46 IN⁴/FT S=6.98 IN³/FT

NOTES:

1. All pultruded grating panels are assembled to size from stocked bar lengths of 20' and 24' to minimize waste and cost. Maximum panel widths (tie bar length) are 4' nominal.
2. Available panel sizes are dependent upon application requirements and individual panel weight considerations because this is a very heavy product.

Industrial Series Uniform Load Chart



IMPORTANT: Load information is different for Phenolic resin gratings. Please contact ZeAllgrate for Phenolic load information.

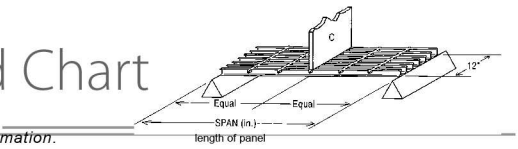
INDUSTRIAL SERIES SAFE-T-SPAN UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (psf) 50	100	200	300	500	1000	2000	MAXIMUM RECOMMENDED LOAD (psf)	ULTIMATE CAPACITY (psf)
12	I6010	<.01	<.01	<.01	<.01	0.01	0.02	0.04	7140	14280
	I6015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	15240	30480
	I5010	<.01	<.01	<.01	<.01	<.01	0.01	0.03	8920	17840
	I5015	<.01	<.01	<.01	<.01	<.01	<.01	0.01	19050	38100
	T5020	<.01	<.01	<.01	<.01	<.01	<.01	0.01	15120	30240
	I4010	<.01	<.01	<.01	<.01	<.01	0.01	0.02	10700	21400
	I4015	<.01	<.01	<.01	<.01	<.01	<.01	0.01	22860	45720
	T3320	<.01	<.01	<.01	<.01	<.01	<.01	0.01	20160	40320
18	I6010	<.01	0.01	0.02	0.02	0.04	0.08	0.16	4520	9040
	I6015	<.01	<.01	<.01	0.01	0.02	0.03	0.06	9820	19650
	I5010	<.01	<.01	0.01	0.01	0.03	0.06	0.12	5640	11290
	I5015	<.01	<.01	<.01	<.01	0.01	0.02	0.04	12280	24560
	T5020	<.01	<.01	<.01	<.01	0.01	0.02	0.05	10080	20160
	I4010	<.01	<.01	0.01	0.02	0.03	0.05	0.11	6770	13540
	I4015	<.01	<.01	<.01	<.01	0.01	0.02	0.04	14740	29490
	T3320	<.01	<.01	<.01	<.01	0.01	0.02	0.04	13440	26880
24	I6010	0.01	0.02	0.05	0.07	0.12	0.24	—	2840	5680
	I6015	<.01	0.01	0.02	0.03	0.04	0.09	0.17	4880	9760
	I5010	<.01	0.01	0.04	0.05	0.09	0.19	—	3550	7100
	I5015	<.01	<.01	0.01	0.02	0.03	0.07	0.13	6100	12200
	T5020	<.01	<.01	<.01	0.02	0.03	0.05	0.11	5940	11880
	I4010	0.01	0.02	0.03	0.05	0.08	0.16	0.31	4260	8520
	I4015	<.01	<.01	0.01	0.02	0.03	0.06	0.11	7310	14620
	T3320	<.01	<.01	<.01	0.01	0.02	0.04	0.08	7920	15840
30	I6010	0.03	0.05	0.11	0.16	0.27	—	—	1840	3680
	I6015	0.01	0.02	0.04	0.06	0.10	0.20	0.41	3600	7200
	I5010	0.02	0.04	0.08	0.12	0.21	0.44	—	2300	4600
	I5015	<.01	0.01	0.03	0.04	0.08	0.16	0.32	4500	9000
	T5020	<.01	0.01	0.02	0.03	0.06	0.13	0.25	4160	8320
	I4010	0.02	0.04	0.07	0.11	0.18	0.36	—	2760	5520
	I4015	<.01	0.01	0.03	0.04	0.07	0.14	0.27	5400	10800
	T3320	<.01	0.01	0.02	0.03	0.05	0.09	0.19	5540	11080
36	I6010	0.05	0.10	0.21	0.31	—	—	—	1310	2620
	I6015	0.02	0.04	0.08	0.11	0.19	0.38	—	2500	5000
	I5010	0.04	0.08	0.16	0.24	—	—	—	1640	3280
	I5015	0.01	0.03	0.06	0.08	0.15	0.30	—	3120	6240
	T5020	0.01	0.02	0.05	0.07	0.12	0.23	0.47	2880	5760
	I4010	0.03	0.07	0.14	0.21	0.35	—	—	1960	3930
	I4015	0.01	0.03	0.05	0.08	0.13	0.25	0.50	3750	7500
	T3320	0.01	0.02	0.04	0.05	0.09	0.18	0.35	3840	7680
42	I6010	0.09	0.19	0.37	—	—	—	—	950	1900
	I6015	0.04	0.07	0.14	0.21	0.35	—	—	1840	3680
	I5010	0.07	0.15	0.29	0.44		—	—	1190	2380
	I5015	0.03	0.05	0.11	0.16	0.28	—	—	2300	4600
	T5020	0.02	0.05	0.09	0.14	0.23	0.45	—	2120	4240
	I4010	0.06	0.12	0.25	0.37	—	—	—	1430	2860
	I4015	0.02	0.05	0.09	0.14	0.23	0.47	—	2760	5520
	T3320	0.02	0.03	0.07	0.10	0.17	0.34	—	2820	5650
48	I6010	0.14	0.29	—	—	—	—	—	720	1440
	I6015	0.06	0.11	0.23	0.34	—	—	—	1410	2820
	I5010	0.11	0.23	0.45	—	—	—	—	900	1800
	I5015	0.04	0.08	0.18	0.27	0.45	—	—	1760	3520
	T5020	0.04	0.07	0.14	0.21	0.36	—	—	1620	3240
	I4010	0.10	0.19	0.38	—	—	—	—	1080	2160
	I4015	0.04	0.08	0.15	0.23	0.38	—	—	2110	4220
	T3320	0.03	0.05	0.11	0.16	0.27	—	—	2160	4320
54	I6010	0.25	—	—	—	—	—	—	570	1140
	I6015	0.10	0.19	0.39	—	—	—	—	1110	2220
	I5010	0.20	0.40	—	—	—	—	—	710	1420
	I5015	0.08	0.15	0.31	0.46	—	—	—	1380	2770
	T5020	0.06	0.12	0.24	0.36	—	—	—	1280	2560
	I4010	0.17	0.34	—	—	—	—	—	850	1700
	I4015	0.06	0.13	0.26	0.39	—	—	—	1670	3340
	T3320	0.04	0.09	0.18	0.27	0.45	—	—	1680	3360
60	I6010	0.42	—	—	—	—	—	—	460	920
	I6015	0.15	0.31	—	—	—	—	—	900	1800
	I5010	0.33	—	—	—	—	—	—	570	1150
	I5015	0.12	0.24	0.49	—	—	—	—	1120	2250
	T5020	0.09	0.18	0.36	—	—	—	—	1040	2080
	I4010	0.28	—	—	—	—	—	—	690	1380
	I4015	0.10	0.21	0.41	—	—	—	—	1350	2700
	T3320	0.07	0.14	0.27	0.41	—	—	—	1360	2720
72	I6015	0.34	—	—	—	—	—	—	630	1260
	I5015	0.27	—	—	—	—	—	—	780	1570
	T5020	0.18	0.35	—	—	—	—	—	720	1440
	I4015	0.23	0.45	—	—	—	—	—	940	1880
	T3320	0.13	0.26	—	—	—	—	—	950	1900

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. Walking loads, typically 50-65 PSF maximum are recommended for pedestrian traffic. Deflections for worker comfort are typically limited to the lesser of 3/8" or CLEAR SPAN divided by 125; for a firmer feel, limit deflection to the lesser of 1/4" or CLEAR SPAN divided by 200.
4. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to the ASCE Structural Plastics Design Manual.
5. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

Industrial Series Concentrated Line Load Chart



IMPORTANT: Load information is different for Phenolic resin gratings. Please contact ZeAllgrate for Phenolic load information.

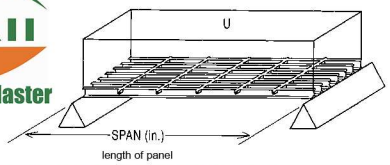
INDUSTRIAL SERIES SAFE-T-SPAN CONCENTRATED LINE LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width)							MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
		50	100	200	300	500	1000	2000		
12	I6010	<.01	<.01	<.01	<.01	0.01	0.03	0.06	3570	7140
	I6015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	7620	15240
	I5010	<.01	<.01	<.01	<.01	0.01	0.02	0.05	4460	8920
	I5015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	9520	19050
	T5020	<.01	<.01	<.01	<.01	<.01	0.01	0.02	7560	15120
	I4010	<.01	<.01	<.01	<.01	0.01	0.02	0.04	5350	10700
	I4015	<.01	<.01	<.01	<.01	<.01	0.01	0.02	11430	22860
	T3320	<.01	<.01	<.01	<.01	<.01	<.01	0.01	10080	20160
18	I6010	<.01	0.01	0.02	0.03	0.04	0.09	0.17	3390	6780
	I6015	<.01	<.01	<.01	0.01	0.02	0.03	0.06	7370	14740
	I5010	<.01	0.01	0.02	0.02	0.03	0.07	0.14	4230	8470
	I5015	<.01	<.01	<.01	0.01	0.02	0.02	0.05	9210	18420
	T5020	<.01	<.01	<.01	<.01	0.01	0.03	0.05	7560	15120
	I4010	<.01	<.01	0.01	0.02	0.03	0.06	0.12	5080	10160
	I4015	<.01	<.01	<.01	<.01	0.01	0.02	0.04	11060	22120
	T3320	<.01	<.01	<.01	<.01	0.01	0.02	0.04	10080	20160
24	I6010	0.01	0.02	0.04	0.06	0.09	0.19	0.38	2840	5680
	I6015	<.01	<.01	0.01	0.02	0.03	0.07	0.14	4880	9760
	I5010	0.01	0.02	0.03	0.05	0.07	0.15	0.30	3550	7100
	I5015	<.01	<.01	0.01	0.02	0.02	0.06	0.11	6100	12200
	T5020	<.01	<.01	<.01	0.01	0.02	0.04	0.08	5940	11880
	I4010	<.01	0.01	0.03	0.04	0.06	0.13	0.25	4260	8520
	I4015	<.01	<.01	<.01	0.01	0.02	0.05	0.10	7310	14620
	T3320	<.01	<.01	<.01	0.01	0.02	0.03	0.06	7920	15840
30	I6010	0.02	0.03	0.07	0.10	0.17	0.35	—	2300	4600
	I6015	<.01	0.01	0.03	0.04	0.06	0.13	0.26	4500	9000
	I5010	0.02	0.02	0.06	0.08	0.14	0.28	—	2870	5750
	I5015	<.01	0.01	0.02	0.03	0.05	0.10	0.21	5620	11250
	T5020	<.01	<.01	0.01	0.02	0.04	0.08	0.16	5200	10400
	I4010	0.01	0.02	0.05	0.07	0.12	0.23	0.47	3450	6900
	I4015	<.01	0.01	0.02	0.03	0.05	0.11	0.22	6750	13500
	T3320	<.01	<.01	0.01	0.02	0.03	0.06	0.12	6930	13860
36	I6010	0.03	0.06	0.11	0.17	0.28	—	—	1970	3940
	I6015	0.01	0.02	0.04	0.06	0.10	0.20	0.40	3750	7500
	I5010	0.02	0.05	0.09	0.14	0.22	0.44	—	2460	4920
	I5015	0.01	0.02	0.03	0.05	0.08	0.16	0.32	4680	9370
	T5020	<.01	0.01	0.02	0.04	0.06	0.12	0.25	4320	8640
	I4010	0.02	0.04	0.07	0.11	0.18	0.37	—	2950	5900
	I4015	<.01	0.01	0.03	0.04	0.07	0.13	0.26	5630	11260
	T3320	<.01	0.01	0.02	0.03	0.05	0.09	0.19	5760	11520
42	I6010	0.04	0.08	0.17	0.25	0.42	—	—	1670	3340
	I6015	0.02	0.03	0.06	0.10	0.16	0.32	—	3220	6440
	I5010	0.03	0.06	0.14	0.20	0.34	—	—	2080	4170
	I5015	0.02	0.02	0.05	0.08	0.13	0.26		4020	8050
	T5020	0.01	0.02	0.04	0.06	0.10	0.21	0.41	3710	7420
	I4010	0.03	0.06	0.11	0.17	0.28	—	—	2500	5000
	I4015	0.01	0.02	0.04	0.06	0.11	0.21	0.42	4820	9640
	T3320	0.01	0.02	0.03	0.05	0.08	0.16	0.31	4950	9900
48	I6010	0.06	0.11	0.23	0.34	—	—	—	1440	2880
	I6015	0.02	0.05	0.09	0.14	0.23	0.46	—	2810	5620
	I5010	0.05	0.09	0.18	0.27	0.46	—	—	1800	3600
	I5015	0.02	0.04	0.07	0.11	0.18	0.37	—	3510	7020
	T5020	0.01	0.03	0.06	0.09	0.15	0.29	—	3250	6500
	I4010	0.04	0.08	0.15	0.23	0.38		—	2160	4320
	I4015	0.02	0.03	0.06	0.09	0.15	0.30	—	4220	8440
	T3320	0.01	0.02	0.04	0.07	0.11	0.22	0.44	4330	8660
54	I6010	0.09	0.18	0.36	—	—	—	—	1280	2560
	I6015	0.03	0.07	0.14	0.21	0.35	—	—	2500	5000
	I5010	0.07	0.14	0.29	0.43	—	—	—	1600	3200
	I5015	0.02	0.06	0.11	0.17	0.28	—	—	3120	6250
	T5020	0.02	0.04	0.08	0.13	0.21	0.42	—	2890	5780
	I4010	0.06	0.12	0.24	0.36	—	—	—	1920	3840
	I4015	0.03	0.05	0.09	0.14	0.23	0.46	—	3750	7500
	T3320	0.02	0.03	0.06	0.10	0.16	0.32	—	3780	7560
60	I6010	0.13	0.27	—	—	—	—	—	1150	2300
	I6015	0.05	0.10	0.20	0.30	0.49	—	—	2250	4500
	I5010	0.10	0.22	0.43	—	—	—	—	1430	2870
	I5015	0.04	0.08	0.16	0.24	0.39	—	—	2810	5620
	T5020	0.03	0.06	0.12	0.17	0.29	—	—	2600	5200
	I4010	0.09	0.18	0.36	—	—	—	—	1730	3460
	I4015	0.04	0.07	0.13	0.20	0.33	—	—	3380	6760
	T3320	0.02	0.04	0.09	0.13	0.22	0.44	—	3400	6800
72	I6010	0.26	—	—	—	—	—	—	960	1920
	I6015	0.09	0.18	0.36	—	—	—	—	1880	3760
	I5010	0.21	0.41	—	—	—	—	—	1200	2400
	I5015	0.07	0.14	0.29	0.43	—	—	—	2350	4700
	T5020	0.05	0.09	0.19	0.28	0.47	—	—	2170	4340
	I4010	0.17	0.34	—	—	—	—	—	1440	2880
	I4015	0.06	0.12	0.24	0.36	—	—	—	2810	5620
	T3320	0.04	0.07	0.14	0.21	0.35	—	—	2830	5660

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. Walking loads, typically 50-65 PSF maximum are recommended for pedestrian traffic. Deflections for worker comfort are typically limited to the lesser of 3/8" or CLEAR SPAN divided by 125; for a firmer feel, limit deflection to the lesser of 1/4" or CLEAR SPAN divided by 200.
4. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to the ASCE Structural Plastics Design Manual.
5. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI37 Grating Uniform Load Chart

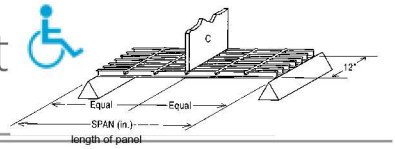


HI37 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES														
CLEAR SPAN (in)	STYLE	LOAD (psf)										MAXIMUM RECOM. LOAD (psf)	ULTIMATE CAPACITY (psf)
		100	200	300	400	500	600	700	800	900	1000		
12	HI3710	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	14800	44400
	HI3715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	27600	82800
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	71300	214000
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	73200	219800
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	94000	282000
18	HI3710	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	7000	21200
	HI3715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	15300	45900
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	32500	97700
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	35200	105700
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	44400	133400
24	HI3710	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.12	0.14	0.16	4200	12700
	HI3715	<0.01	<0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	10300	30900
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	18800	56400
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	21300	63900
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	26500	79600
30	HI3710	0.04	0.08	0.11	0.15	0.19	0.23	0.27	0.30	0.34	0.38	2700	8100
	HI3715	<0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	0.09	6600	19800
	HI3720	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04	12300	37100
	HI3725	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	14600	43800
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.01	17900	53800
36	HI3710	0.08	0.16	0.24	0.32	0.39	0.47	—	—	—	—	1800	5600
	HI3715	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17	0.19	4500	13700
	HI3720	<0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	8800	26400
	HI3725	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	10800	32400
	HI3730	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	13100	39400
42	HI3710	0.15	0.29	0.44	—	—	—	—	—	—	—	1300	4100
	HI3715	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31	0.35	3300	10100
	HI3720	0.02	0.03	0.05	0.06	0.08	0.09	0.11	0.13	0.14	0.16	6400	19400
	HI3725	<0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.08	8200	24600
	HI3730	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	10100	30400
48	HI3710	0.25	0.50	—	—	—	—	—	—	—	—	1000	3100
	HI3715	0.06	0.12	0.18	0.24	0.30	0.36	0.42	0.47	—	—	2500	7700
	HI3720	0.03	0.05	0.08	0.11	0.13	0.16	0.19	0.22	0.24	0.27	4900	14800
	HI3725	0.01	0.03	0.04	0.06	0.07	0.08	0.10	0.11	0.13	0.14	6500	19500
	HI3730	<0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.07	0.08	8100	24400
52	HI3710	0.34	—	—	—	—	—	—	—	—	—	900	2700
	HI3715	0.08	0.16	0.25	0.33	0.41	0.49	—	—	—	—	2100	6500
	HI3720	0.04	0.07	0.11	0.15	0.19	0.22	0.26	0.30	0.33	0.37	4200	12600
	HI3725	0.02	0.04	0.06	0.08	0.10	0.11	0.13	0.15	0.17	0.19	5500	16600
	HI3730	0.01	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.10	0.11	7000	21200
60	HI3715	0.14	0.29	0.43	—	—	—	—	—	—	—	1600	4900
	HI3720	0.07	0.13	0.20	0.26	0.33	0.40	0.46	—	—	—	3100	9500
	HI3725	0.03	0.07	0.10	0.14	0.17	0.20	0.24	0.27	0.31	0.34	4100	12500
	HI3730	0.02	0.04	0.06	0.08	0.10	0.12	0.14	0.16	0.18	0.20	5400	16200
66	HI3715	0.21	0.42	—	—	—	—	—	—	—	—	1300	4000
	HI3720	0.10	0.19	0.29	0.39	0.48	—	—	—	—	—	2600	7800
	HI3725	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	3400	10300
	HI3730	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.23	0.26	0.29	4400	13400
72	HI3715	0.30	—	—	—	—	—	—	—	—	—	1100	3400
	HI3720	0.14	0.27	0.41	—	—	—	—	—	—	—	2200	6600
	HI3725	0.07	0.14	0.21	0.28	0.35	0.42	0.49	—	—	—	2800	8600
	HI3730	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37	0.42	3700	11200
84	HI3720	0.25	—	—	—	—	—	—	—	—	—	1600	4800
	HI3725	0.13	0.26	0.39	—	—	—	—	—	—	—	2100	6300
	HI3730	0.08	0.15	0.23	0.31	0.38	0.46	—	—	—	—	2700	8200
96	HI3720	0.43	—	—	—	—	—	—	—	—	—	1200	3700
	HI3725	0.22	0.44	—	—	—	—	—	—	—	—	1600	4800
	HI3730	0.13	0.26	0.39	—	—	—	—	—	—	—	2100	6300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to ASCE Structural Plastics Design Manual.
4. Fibergrate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergrate Engineering.
5. Fibergrate recommends a maximum deflection of 0.25" for this product under normal loading conditions. The use of L/500 may be required by certain construction codes. Check code requirements to determine design criteria.
6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI37 Grating Concentrated Line Load Chart



HI37 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

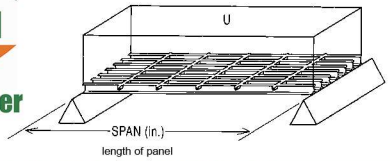
CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width) 100	200	300	500	1000	2000	3000	4000	5000	6000	MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
12	HI3710	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.05	0.07	0.09	0.11	7400	22200
	HI3715	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	13800	41400
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	35600	107000
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	36600	109900
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	47000	141000
18	HI3710	<0.01	0.01	0.02	0.03	0.06	0.11	0.17	0.23	0.28	0.34	5300	15900
	HI3715	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.09	11400	34400
	HI3720	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.03	0.03	0.04	24400	73300
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.02	26400	79200
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	33300	100000
24	HI3710	0.01	0.02	0.04	0.06	0.12	0.25	0.37	0.50	—	—	4200	12700
	HI3715	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.09	0.12	0.15	0.18	10300	30900
	HI3720	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.09	18800	56400
	HI3725	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.03	0.04	0.05	21300	63900
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	26500	79600
30	HI3710	0.02	0.05	0.07	0.12	0.24	0.49	—	—	—	—	3400	10200
	HI3715	<0.01	0.01	0.02	0.03	0.06	0.12	0.17	0.23	0.29	0.35	8200	24700
	HI3720	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.08	0.11	0.14	0.17	15400	46300
	HI3725	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.06	0.08	0.09	18200	54800
	HI3730	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.05	0.06	22400	67300
36	HI3710	0.04	0.08	0.13	0.21	0.42	—	—	—	—	—	2800	8500
	HI3715	0.01	0.02	0.03	0.05	0.10	0.20	0.30	0.40	—	—	6800	20600
	HI3720	<0.01	<0.01	0.01	0.02	0.05	0.09	0.14	0.18	0.23	0.27	13200	39600
	HI3725	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.10	0.12	0.15	16200	48600
	HI3730	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.06	0.08	0.09	19700	59100
42	HI3710	0.07	0.13	0.20	0.33	—	—	—	—	—	—	2400	7300
	HI3715	0.02	0.03	0.05	0.08	0.16	0.32	0.48	—	—	—	5800	17600
	HI3720	<0.01	0.01	0.02	0.04	0.07	0.14	0.22	0.29	0.36	0.43	11300	33900
	HI3725	<0.01	<0.01	0.01	0.02	0.04	0.08	0.11	0.15	0.19	0.23	14400	43200
	HI3730	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.09	0.12	0.14	17700	53300
48	HI3710	0.10	0.20	0.30	0.50	—	—	—	—	—	—	2100	6300
	HI3715	0.02	0.05	0.07	0.12	0.24	0.47	—	—	—	—	5100	15400
	HI3720	0.01	0.02	0.03	0.05	0.11	0.22	0.32	0.43	—	—	9900	29700
	HI3725	<0.01	0.01	0.02	0.03	0.06	0.11	0.17	0.22	0.28	0.33	13000	39100
	HI3730	<0.01	<0.01	<0.01	0.02	0.03	0.07	0.10	0.13	0.17	0.20	16300	48900
52	HI3710	0.13	0.25	0.38	—	—	—	—	—	—	—	1900	5900
	HI3715	0.03	0.06	0.09	0.15	0.30	—	—	—	—	—	4700	14200
	HI3720	0.01	0.03	0.04	0.07	0.14	0.27	0.41	—	—	—	9100	27400
	HI3725	<0.01	0.01	0.02	0.04	0.07	0.14	0.21	0.28	0.35	0.42	12000	36100
	HI3730	<0.01	<0.01	0.01	0.02	0.04	0.08	0.13	0.17	0.21	0.25	15300	46000
60	HI3710	0.19	0.39	—	—	—	—	—	—	—	—	1700	5100
	HI3715	0.05	0.09	0.14	0.23	0.46	—	—	—	—	—	4100	12300
	HI3720	0.02	0.04	0.06	0.11	0.21	0.42	—	—	—	—	7900	23700
	HI3725	0.01	0.02	0.03	0.05	0.11	0.22	0.33	0.43	—	—	10400	31200
	HI3730	<0.01	0.01	0.02	0.03	0.06	0.13	0.19	0.26	0.32	0.38	13500	40600
66	HI3710	0.26	—	—	—	—	—	—	—	—	—	1500	4600
	HI3715	0.06	0.12	0.19	0.31	—	—	—	—	—	—	3700	11200
	HI3720	0.03	0.06	0.08	0.14	0.28	—	—	—	—	—	7200	21600
	HI3725	0.01	0.03	0.04	0.07	0.14	0.29	0.43	—	—	—	9400	28400
	HI3730	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.34	0.43	—	12300	36900
72	HI3710	0.34	—	—	—	—	—	—	—	—	—	1400	4200
	HI3715	0.08	0.16	0.24	0.40	—	—	—	—	—	—	3400	10300
	HI3720	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	6600	19800
	HI3725	0.02	0.04	0.06	0.09	0.19	0.38	—	—	—	—	8600	26000
	HI3730	0.01	0.02	0.03	0.06	0.11	0.22	0.33	0.44	—	—	11200	33800
84	HI3715	0.13	0.25	0.38	—	—	—	—	—	—	—	2900	8800
	HI3720	0.06	0.12	0.17	0.29	—	—	—	—	—	—	5600	16900
	HI3725	0.03	0.06	0.09	0.15	0.30	—	—	—	—	—	7400	22300
	HI3730	0.02	0.04	0.05	0.09	0.18	0.35	—	—	—	—	9600	29000
96	HI3715	0.19	0.38	—	—	—	—	—	—	—	—	2500	7700
	HI3720	0.09	0.17	0.26	0.43	—	—	—	—	—	—	4900	14800
	HI3725	0.04	0.09	0.13	0.22	0.44	—	—	—	—	—	6500	19500
	HI3730	0.03	0.05	0.08	0.13	0.26	—	—	—	—	—	8400	25300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to ASCE Structural Plastics Design Manual.
4. ZeAllgrate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergrate Engineering.
5. ZeAllgrate recommends a maximum deflection of 0.25" for this product under normal loading conditions. The use of L/500 may be required by certain construction codes. Check code requirements to determine design criteria.
6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI47 Grating Uniform Load Chart

ZeAll FRP Grating Master



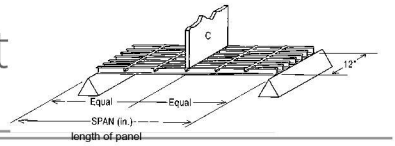
HI47 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES														
CLEAR SPAN (in)	STYLE	LOAD (psf)										MAXIMUM RECOM. LOAD (psf)	ULTIMATE CAPACITY (psf)
		100	200	300	400	500	600	700	800	900	1000		
12	HI4710	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	12400	37300
	HI4715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	23200	69600
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	60100	180300
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	61700	185100
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	79200	237600
18	HI4710	<0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.06	0.06	5900	17800
	HI4715	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	12800	38500
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	27400	82400
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	29600	89000
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	37400	112400
24	HI4710	0.02	0.04	0.06	0.07	0.09	0.11	0.13	0.15	0.17	0.18	3500	10700
	HI4715	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.04	8600	26000
	HI4720	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	15800	47600
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	17900	53900
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	22300	67000
30	HI4710	0.04	0.09	0.13	0.18	0.22	0.27	0.31	0.36	0.40	0.45	2200	6800
	HI4715	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	5500	16600
	HI4720	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	10400	31200
	HI4725	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	12300	36900
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	15100	45300
36	HI4710	0.09	0.19	0.28	0.37	0.46	—	—	—	—	—	1500	4700
	HI4715	0.02	0.04	0.07	0.09	0.11	0.13	0.16	0.18	0.20	0.22	3800	11500
	HI4720	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	7400	22200
	HI4725	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.05	9100	27300
	HI4730	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	11000	33200
42	HI4710	0.17	0.34	—	—	—	—	—	—	—	—	1100	3500
	HI4715	0.04	0.08	0.12	0.17	0.21	0.25	0.29	0.33	0.37	0.41	2800	8400
	HI4720	0.02	0.04	0.06	0.08	0.09	0.11	0.13	0.15	0.17	0.19	5400	16300
	HI4725	<0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	6900	20800
	HI4730	<0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	8500	25600
48	HI4710	0.29	—	—	—	—	—	—	—	—	—	800	2600
	HI4715	0.07	0.14	0.21	0.28	0.35	0.42	0.49	—	—	—	2100	6500
	HI4720	0.03	0.06	0.10	0.13	0.16	0.19	0.22	0.26	0.29	0.32	4100	12500
	HI4725	0.02	0.03	0.05	0.07	0.08	0.10	0.12	0.13	0.15	0.16	5400	16400
	HI4730	<0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	6800	20600
52	HI4710	0.40	—	—	—	—	—	—	—	—	—	700	2200
	HI4715	0.10	0.19	0.29	0.39	0.48	—	—	—	—	—	1800	5500
	HI4720	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40	0.44	3500	10600
	HI4725	0.02	0.05	0.07	0.09	0.11	0.14	0.16	0.18	0.20	0.23	4600	14000
	HI4730	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12	0.13	5900	17800
60	HI4715	0.17	0.34	—	—	—	—	—	—	—	—	1300	4100
	HI4720	0.08	0.16	0.23	0.31	0.39	0.47	—	—	—	—	2600	8000
	HI4725	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	3500	10500
	HI4730	0.02	0.05	0.07	0.10	0.12	0.14	0.17	0.19	0.21	0.24	4500	13600
66	HI4715	0.25	—	—	—	—	—	—	—	—	—	1100	3400
	HI4720	0.11	0.23	0.34	0.46	—	—	—	—	—	—	2200	6600
	HI4725	0.06	0.12	0.18	0.24	0.29	0.35	0.41	0.47	—	—	2900	8700
	HI4730	0.03	0.07	0.10	0.14	0.17	0.21	0.24	0.28	0.31	0.35	3700	11300
72	HI4715	0.36	—	—	—	—	—	—	—	—	—	900	2800
	HI4720	0.16	0.32	0.49	—	—	—	—	—	—	—	1800	5500
	HI4725	0.08	0.17	0.25	0.33	0.42	—	—	—	—	—	2400	7300
	HI4730	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.39	0.44	0.49	3100	9500
84	HI4720	0.30	—	—	—	—	—	—	—	—	—	1300	4000
	HI4725	0.15	0.31	0.46	—	—	—	—	—	—	—	1700	5300
	HI4730	0.09	0.18	0.27	0.37	0.46	—	—	—	—	—	2300	6900
96	HI4725	0.26	—	—	—	—	—	—	—	—	—	1300	4100
	HI4730	0.16	0.31	0.47	—	—	—	—	—	—	—	1700	5300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to ASCE Structural Plastics Design Manual.
4. ZeAllgrate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergrate Engineering.
5. ZeAllgrate recommends a maximum deflection of 0.25" for this product under normal loading conditions. The use of L/500 may be required by certain construction codes. Check code requirements to determine design criteria.
6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

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HI47 Grating Concentrated Line Load Chart



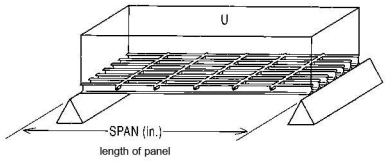
HI47 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width) 100	200	300	500	1000	2000	3000	4000	5000	6000	MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
12	HI4710	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.06	0.08	0.11	0.13	6200	18600
	HI4715	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.04	11600	34800
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	30000	90100
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	30800	92500
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	39600	118800
18	HI4710	<0.01	0.01	0.02	0.03	0.07	0.13	0.20	0.27	0.33	0.40	4400	13300
	HI4715	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.07	0.09	0.10	9600	28900
	HI4720	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.04	0.05	20600	61800
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	22200	66800
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	28100	84300
24	HI4710	0.01	0.03	0.04	0.07	0.15	0.29	0.44	—	—	—	3500	10700
	HI4715	<0.01	<0.01	0.01	0.02	0.04	0.07	0.11	0.14	0.18	0.21	8600	26000
	HI4720	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.05	0.07	0.09	0.10	15800	47600
	HI4725	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.05	0.06	17900	53900
	HI4730	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.04	22300	67000
30	HI4710	0.03	0.06	0.09	0.14	0.29	—	—	—	—	—	2800	8500
	HI4715	<0.01	0.01	0.02	0.03	0.07	0.14	0.21	0.27	0.34	0.41	6900	20800
	HI4720	<0.01	<0.01	<0.01	0.02	0.03	0.07	0.10	0.13	0.16	0.20	13000	39000
	HI4725	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.05	0.07	0.09	0.11	15300	46100
	HI4730	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.03	0.04	0.06	0.07	18900	56700
36	HI4710	0.05	0.10	0.15	0.25	0.50	—	—	—	—	—	2300	7100
	HI4715	0.01	0.02	0.04	0.06	0.12	0.24	0.36	0.48	—	—	5700	17300
	HI4720	<0.01	0.01	0.02	0.03	0.05	0.11	0.16	0.22	0.27	0.32	11100	33400
	HI4725	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.09	0.12	0.15	0.17	13600	41000
	HI4730	<0.01	<0.01	<0.01	<0.01	0.02	0.04	0.06	0.07	0.09	0.11	16600	49800
42	HI4710	0.08	0.16	0.24	0.39	—	—	—	—	—	—	2000	6100
	HI4715	0.02	0.04	0.06	0.09	0.19	0.38	—	—	—	—	4900	14800
	HI4720	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.34	0.43	—	9500	28600
	HI4725	<0.01	<0.01	0.01	0.02	0.05	0.09	0.14	0.18	0.23	0.27	12100	36400
	HI4730	<0.01	<0.01	<0.01	0.01	0.03	0.06	0.08	0.11	0.14	0.17	14900	44900
48	HI4710	0.12	0.24	0.35	—	—	—	—	—	—	—	1700	5300
	HI4715	0.03	0.06	0.08	0.14	0.28	—	—	—	—	—	4300	13000
	HI4720	0.01	0.03	0.04	0.06	0.13	0.26	0.38	—	—	—	8300	25000
	HI4725	<0.01	0.01	0.02	0.03	0.07	0.13	0.20	0.26	0.33	0.40	10900	32900
	HI4730	<0.01	<0.01	0.01	0.02	0.04	0.08	0.12	0.16	0.20	0.24	13700	41200
52	HI4710	0.15	0.30	0.45	—	—	—	—	—	—	—	1600	4900
	HI4715	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	4000	12000
	HI4720	0.02	0.03	0.05	0.08	0.16	0.33	0.49	—	—	—	7700	23100
	HI4725	<0.01	0.02	0.03	0.04	0.08	0.17	0.25	0.34	0.42	—	10100	30400
	HI4730	<0.01	<0.01	0.01	0.02	0.05	0.10	0.15	0.20	0.25	0.30	12900	38700
60	HI4710	0.23	0.46	—	—	—	—	—	—	—	—	1400	4200
	HI4715	0.05	0.11	0.16	0.27	—	—	—	—	—	—	3400	10400
	HI4720	0.03	0.05	0.08	0.13	0.25	—	—	—	—	—	6600	20000
	HI4725	0.01	0.03	0.04	0.06	0.13	0.26	0.39	—	—	—	8700	26300
	HI4730	<0.01	0.02	0.02	0.04	0.08	0.15	0.23	0.30	0.38	0.46	11400	34200
66	HI4710	0.31	—	—	—	—	—	—	—	—	—	1300	3900
	HI4715	0.07	0.15	0.22	0.37	—	—	—	—	—	—	3100	9400
	HI4720	0.03	0.07	0.10	0.17	0.33	—	—	—	—	—	6000	18200
	HI4725	0.02	0.03	0.05	0.09	0.17	0.34	—	—	—	—	7900	23900
	HI4730	0.01	0.02	0.03	0.05	0.10	0.20	0.30	0.41	—	—	10300	31100
72	HI4710	0.40	—	—	—	—	—	—	—	—	—	1100	3500
	HI4715	0.10	0.19	0.29	0.48	—	—	—	—	—	—	2800	8600
	HI4720	0.04	0.09	0.13	0.22	0.43	—	—	—	—	—	5500	16700
	HI4725	0.02	0.04	0.07	0.11	0.22	0.45	—	—	—	—	7300	21900
	HI4730	0.01	0.03	0.04	0.07	0.13	0.26	0.39	—	—	—	9500	28500
84	HI4715	0.15	0.30	0.45	—	—	—	—	—	—	—	2400	7400
	HI4720	0.07	0.14	0.21	0.34	—	—	—	—	—	—	4700	14300
	HI4725	0.04	0.07	0.11	0.18	0.35	—	—	—	—	—	6200	18800
	HI4730	0.02	0.04	0.06	0.10	0.21	0.42	—	—	—	—	8100	24400
96	HI4715	0.23	0.45	—	—	—	—	—	—	—	—	2100	6500
	HI4720	0.10	0.20	0.31	—	—	—	—	—	—	—	4100	12500
	HI4725	0.05	0.11	0.16	0.26	—	—	—	—	—	—	5400	16400
	HI4730	0.03	0.06	0.09	0.16	0.31	—	—	—	—	—	7100	21300

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to ASCE Structural Plastics Design Manual.
4. ZeAllgrate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergrate Engineering.
5. ZeAllgrate recommends a maximum deflection of 0.25" for this product under normal loading conditions. The use of L/500 may be required by certain construction codes. Check code requirements to determine design criteria.
6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI58 Grating Uniform Load Chart

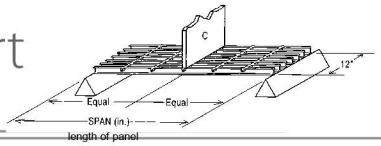


HI58 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES														
CLEAR SPAN (in)	STYLE	LOAD (psf)										MAXIMUM RECOM. LOAD (psf)	ULTIMATE CAPACITY (psf)
		100	200	300	400	500	600	700	800	900	1000		
12	HI5810	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	9800	29500
	HI5815	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	18300	55100
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	47600	142800
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	48800	146600
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	62700	188100
18	HI5810	<0.01	0.02	0.02	0.03	0.04	0.05	0.06	0.06	0.07	0.08	4700	14100
	HI5815	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	0.02	0.02	10100	30500
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	21700	65200
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	23500	70500
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	29600	89000
24	HI5810	0.02	0.05	0.07	0.09	0.12	0.14	0.16	0.19	0.21	0.23	2800	8500
	HI5815	<0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04	0.05	0.06	6800	20500
	HI5820	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.03	12500	37600
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.01	0.02	14200	42600
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	17700	53100
30	HI5810	0.06	0.11	0.17	0.23	0.28	0.34	0.40	0.45	—	—	1800	5400
	HI5815	0.01	0.03	0.04	0.05	0.07	0.08	0.09	0.11	0.12	0.14	4300	13100
	HI5820	<0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.05	0.06	0.06	8200	24700
	HI5825	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.04	9700	29200
	HI5830	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.02	11900	35900
36	HI5810	0.12	0.23	0.35	0.47	—	—	—	—	—	—	1200	3700
	HI5815	0.03	0.06	0.08	0.11	0.14	0.17	0.20	0.22	0.25	0.28	3000	9100
	HI5820	0.01	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.12	0.13	5800	17600
	HI5825	<0.01	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.06	0.07	7200	21600
	HI5830	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.04	0.04	8700	26300
42	HI5810	0.22	0.44	—	—	—	—	—	—	—	—	900	2700
	HI5815	0.05	0.10	0.16	0.21	0.26	0.31	0.36	0.42	0.47	—	2200	6700
	HI5820	0.02	0.05	0.07	0.09	0.12	0.14	0.17	0.19	0.21	0.24	4300	12900
	HI5825	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	5400	16400
	HI5830	<0.01	0.02	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08	6700	20300
48	HI5810	0.37	—	—	—	—	—	—	—	—	—	700	2100
	HI5815	0.09	0.18	0.27	0.36	0.44	—	—	—	—	—	1700	5100
	HI5820	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.32	0.36	0.40	3300	9900
	HI5825	0.02	0.04	0.06	0.08	0.10	0.13	0.15	0.17	0.19	0.21	4300	13000
	HI5830	0.01	0.02	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.12	5400	16300
52	HI5815	0.12	0.24	0.37	0.49	—	—	—	—	—	—	1400	4300
	HI5820	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.45	—	—	2800	8400
	HI5825	0.03	0.06	0.09	0.11	0.14	0.17	0.20	0.23	0.26	0.29	3700	11100
	HI5830	0.02	0.03	0.05	0.07	0.09	0.10	0.12	0.14	0.15	0.17	4700	14100
60	HI5815	0.22	0.43	—	—	—	—	—	—	—	—	1000	3200
	HI5820	0.10	0.20	0.30	0.40	0.49	—	—	—	—	—	2100	6300
	HI5825	0.05	0.10	0.15	0.20	0.25	0.31	0.36	0.41	0.46	—	2700	8300
	HI5830	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30	3600	10800
66	HI5815	0.32	—	—	—	—	—	—	—	—	—	900	2700
	HI5820	0.14	0.29	0.43	—	—	—	—	—	—	—	1700	5200
	HI5825	0.07	0.15	0.22	0.30	0.37	0.45	—	—	—	—	2300	6900
	HI5830	0.04	0.09	0.13	0.18	0.22	0.26	0.31	0.35	0.40	0.44	2900	8900
72	HI5815	0.45	—	—	—	—	—	—	—	—	—	700	2200
	HI5820	0.20	0.41	—	—	—	—	—	—	—	—	1400	4400
	HI5825	0.11	0.21	0.32	0.42	—	—	—	—	—	—	1900	5700
	HI5830	0.06	0.12	0.19	0.25	0.31	0.37	0.44	0.50	—	—	2500	7500
84	HI5820	0.38	—	—	—	—	—	—	—	—	—	1000	3200
	HI5825	0.20	0.39	—	—	—	—	—	—	—	—	1400	4200
	HI5830	0.12	0.23	0.35	0.46	—	—	—	—	—	—	1800	5500
96	HI5825	0.33	—	—	—	—	—	—	—	—	—	1000	3200
	HI5830	0.20	0.39	—	—	—	—	—	—	—	—	1400	4200

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 3:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to ASCE Structural Plastics Design Manual.
4. ZeAllgrate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergrate Engineering.
5. ZeAllgrate recommends a maximum deflection of 0.25" for this product under normal loading conditions. The use of L/500 may be required by certain construction codes. Check code requirements to determine design criteria.
6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

HI58 Grating Concentrated Line Load Chart



HI58 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

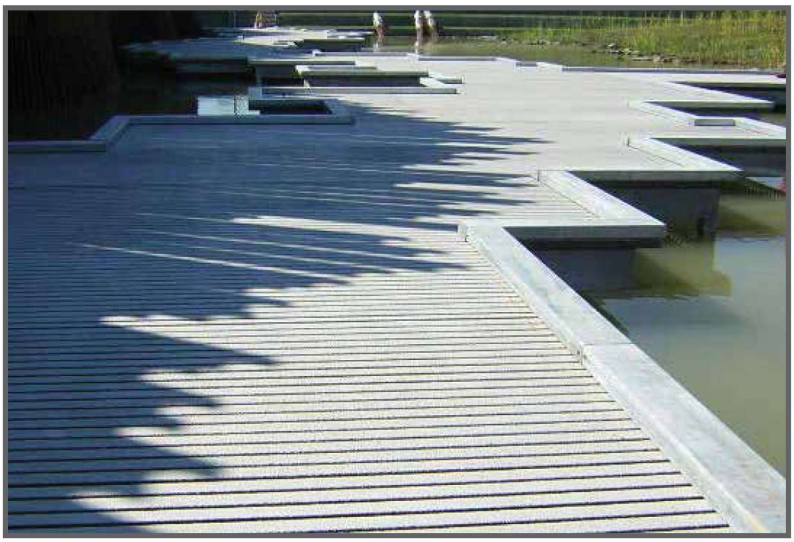
CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width) 100	200	300	500	1000	2000	3000	4000	5000	6000	MAXIMUM RECOM. LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
12	HI5810	<0.01	<0.01	<0.01	0.01	0.03	0.05	0.08	0.11	0.13	0.16	4900	14700
	HI5815	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.04	0.05	9100	27500
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	23800	71400
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	24400	73300
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	31300	94000
18	HI5810	<0.01	0.02	0.03	0.04	0.08	0.17	0.25	0.34	0.42	—	3500	10600
	HI5815	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.07	0.09	0.11	0.13	7600	22900
	HI5820	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.03	0.04	0.05	0.06	16300	48900
	HI5825	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.03	17600	52900
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.01	0.02	0.02	22200	66700
24	HI5810	0.02	0.04	0.06	0.09	0.19	0.37	—	—	—	—	2800	8500
	HI5815	<0.01	<0.01	0.01	0.02	0.04	0.09	0.13	0.18	0.22	0.27	6800	20500
	HI5820	<0.01	<0.01	<0.01	0.01	0.02	0.04	0.07	0.09	0.11	0.13	12500	37600
	HI5825	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.05	0.06	0.08	14200	42600
	HI5830	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.02	0.03	0.04	0.05	17700	53100
30	HI5810	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	2200	6800
	HI5815	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.35	0.43	—	5400	16400
	HI5820	<0.01	<0.01	0.01	0.02	0.04	0.08	0.12	0.16	0.21	0.25	10300	30900
	HI5825	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.09	0.11	0.14	12100	36500
	HI5830	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.08	14900	44900
36	HI5810	0.06	0.13	0.19	0.31	—	—	—	—	—	—	1800	5600
	HI5815	0.01	0.03	0.04	0.07	0.15	0.30	0.45	—	—	—	4500	13700
	HI5820	<0.01	0.01	0.02	0.03	0.07	0.14	0.20	0.27	0.34	0.41	8800	26400
	HI5825	<0.01	<0.01	0.01	0.02	0.04	0.07	0.11	0.15	0.18	0.22	10800	32400
	HI5830	<0.01	<0.01	<0.01	0.01	0.02	0.05	0.07	0.09	0.12	0.14	13100	39400
42	HI5810	0.10	0.20	0.30	0.50	—	—	—	—	—	—	1600	4800
	HI5815	0.02	0.05	0.07	0.12	0.24	0.48	—	—	—	—	3900	11700
	HI5820	0.01	0.02	0.03	0.05	0.11	0.22	0.33	0.43	—	—	7500	22600
	HI5825	<0.01	0.01	0.02	0.03	0.06	0.11	0.17	0.23	0.29	0.34	9600	28800
	HI5830	<0.01	<0.01	0.01	0.02	0.03	0.07	0.10	0.14	0.17	0.21	11800	35500
48	HI5810	0.15	0.30	0.45	—	—	—	—	—	—	—	1400	4200
	HI5815	0.04	0.07	0.11	0.18	0.36	—	—	—	—	—	3400	10200
	HI5820	0.02	0.03	0.05	0.08	0.16	0.32	0.49	—	—	—	6600	19800
	HI5825	<0.01	0.02	0.03	0.04	0.08	0.17	0.25	0.33	0.42	—	8600	26000
	HI5830	<0.01	<0.01	0.01	0.02	0.05	0.10	0.15	0.20	0.25	0.30	10800	32600
52	HI5810	0.19	0.38	—	—	—	—	—	—	—	—	1300	3900
	HI5815	0.05	0.09	0.14	0.23	0.45	—	—	—	—	—	3100	9500
	HI5820	0.02	0.04	0.06	0.10	0.21	0.41	—	—	—	—	6100	18300
	HI5825	0.01	0.02	0.03	0.05	0.11	0.21	0.32	0.42	—	—	8000	24000
	HI5830	<0.01	0.01	0.02	0.03	0.06	0.13	0.19	0.25	0.31	0.38	10200	30600
60	HI5810	0.29	—	—	—	—	—	—	—	—	—	1100	3400
	HI5815	0.07	0.14	0.21	0.35	—	—	—	—	—	—	2700	8200
	HI5820	0.03	0.06	0.09	0.16	0.32	—	—	—	—	—	5200	15800
	HI5825	0.02	0.03	0.05	0.08	0.16	0.33	0.49	—	—	—	6900	20800
	HI5830	<0.01	0.02	0.03	0.05	0.10	0.19	0.29	0.38	0.48	—	9000	27100
66	HI5810	0.39	—	—	—	—	—	—	—	—	—	1000	3000
	HI5815	0.09	0.18	0.28	0.46	—	—	—	—	—	—	2400	7400
	HI5820	0.04	0.08	0.13	0.21	0.42	—	—	—	—	—	4800	14400
	HI5825	0.02	0.04	0.07	0.11	0.22	0.43	—	—	—	—	6300	18900
	HI5830	0.01	0.03	0.04	0.06	0.13	0.26	0.38	—	—	—	8200	24600
72	HI5815	0.12	0.24	0.36	—	—	—	—	—	—	—	2200	6800
	HI5820	0.05	0.11	0.16	0.27	—	—	—	—	—	—	4400	13200
	HI5825	0.03	0.06	0.08	0.14	0.28	—	—	—	—	—	5700	17300
	HI5830	0.02	0.03	0.05	0.08	0.17	0.33	0.50	—	—	—	7500	22500
84	HI5815	0.19	0.38	—	—	—	—	—	—	—	—	1900	5800
	HI5820	0.09	0.17	0.26	0.43	—	—	—	—	—	—	3700	11300
	HI5825	0.04	0.09	0.13	0.22	0.45	—	—	—	—	—	4900	14900
	HI5830	0.03	0.05	0.08	0.13	0.26	—	—	—	—	—	6400	19300
96	HI5815	0.28	—	—	—	—	—	—	—	—	—	1700	5100
	HI5820	0.13	0.26	0.39	—	—	—	—	—	—	—	3300	9900
	HI5825	0.07	0.13	0.20	0.33	—	—	—	—	—	—	4300	13000
	HI5830	0.04	0.08	0.12	0.20	0.39	—	—	—	—	—	5600	16900

NOTES:

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6. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

Safe Span Pedestrian Grating Details

Designed specifically for pedestrian walkways, Fibergrate's Safe Span pultruded pedestrian grating is ideal for applications where a slip resistant, corrosion resistant, durable, lightweight material is required. Safe Span pedestrian pultruded grating is available in 1" and 1-1/2" depths and in several configurations and panel sizes. Safe Span 1" deep pedestrian grating is designed for access areas and walkways where pedestrian traffic is the heaviest load. Pedestrian 1-1/2" deep grating is approximately three times stiffer than the 1" deep version and is used for applications where wider spans (up to 72") or lower deflection criteria are required.



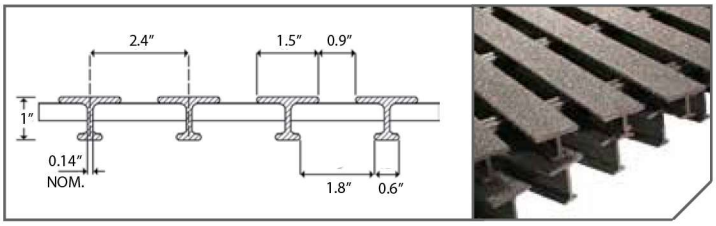
Pontoon Boardwalk in Portland, Oregon

Grating Details

Refer to chart on page 4 for Grating Selection.

1" Deep T3810

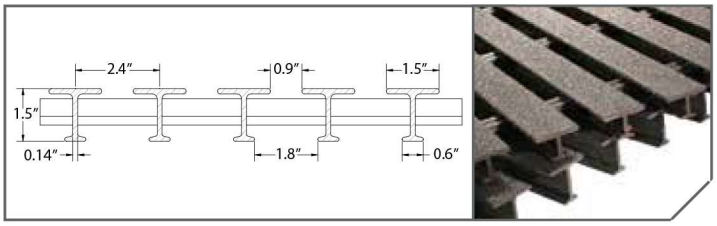
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
5	1"	38%	2.4"	1.9 psf



Section Properties per Ft of Width: A=1.76 IN² I=0.23 IN⁴ St=0.65 IN³ Sb=0.35 IN³
Average EI = 1,120,000 lb - in² (SPAN ≥ 24")

1-1/2" Deep T3815

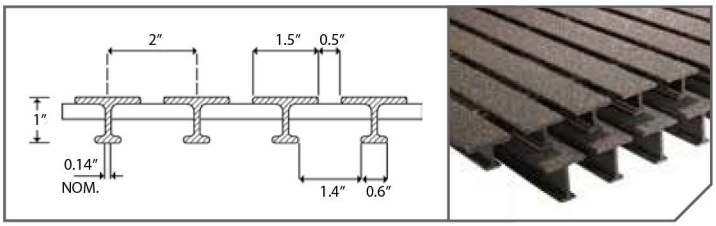
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
5	1-1/2"	38%	2.4"	2.7 psf



Section Properties per Ft of Width: A=2.28 IN² I=0.66 IN⁴ St=1.23 IN³ Sb=0.69 IN³
Average EI = 3,440,000 lb - in² (SPAN ≥ 24")

1" Deep T2510 (ADA Compliant)

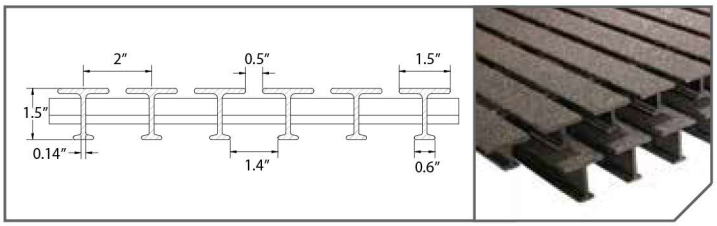
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
6	1"	25%	2"	2.5 psf



Section Properties per Ft of Width: A=2.11 IN² I=0.27 IN⁴ St=0.79 IN³ Sb=0.42 IN³
Average EI = 1,340,000 lb - in² (SPAN ≥ 24")

1-1/2" Deep T2515 (ADA Compliant)

# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
6	1-1/2"	25%	2"	2.9 psf



Section Properties per Ft of Width: A=2.73 IN² I=0.8 IN⁴ St=1.47 IN³ Sb=0.83 IN³
Average EI = 4,130,000 lb - in² (SPAN ≥ 24")

Aqua Grate Pedestrian Grating Details

Aqua Grate T1210 and T1215 pultruded pedestrian grating is specifically engineered to withstand the corrosive conditions associated with recreational and general marine applications and to meet ADA guidelines. With its nominal 1/4" space between the 1-1/2" wide bearing bars, Aqua Grate offers optimum comfort and safety for bathers walking with bare feet — a must in high traffic, public recreational areas. Aqua Grate grating has a unique combination of corrosion resistance and light weight which provides easy, inexpensive installations in such facilities as swimming pools, water parks, marinas and piers.



Boat dock on Horseshoe Lake in Haliburton, Ontario.

Aqua Grate is available in a variety of lengths and widths, making it useful for a number of waterfront and recreational applications. The fine grit surface of Aqua Grate provides a high level of slip resistance, yet at the same time offers a comfortable barefoot walking surface. Protection against long-term UV exposure is provided by a synthetic surfacing veil and UV inhibitors in the resin formulation. Whether subjected to chlorinated water in public and private pools or salt water environments found in marine and waterfront applications, Aqua Grate will offer years of low cost, low maintenance service.



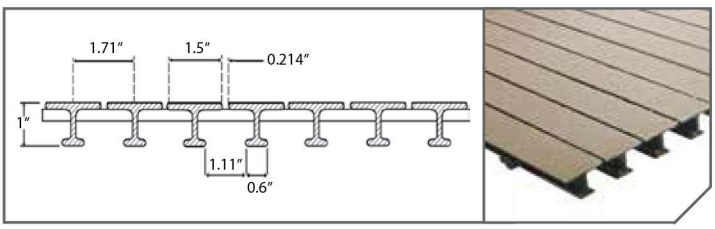
Corinthian Yacht Club Harbor in San Francisco, California.

Grating Details

Refer to chart on page 4 for Grating Selection.

1" Deep T1210 (ADA Compliant)

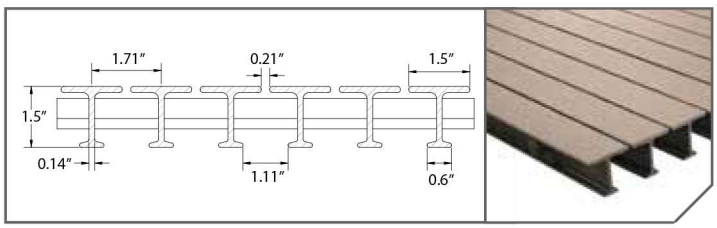
# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
7	1"	12%	1.714"	2.7 psf



Section Properties per Ft of Width: A=2.46 IN² I=0.32 IN⁴ St=0.94 IN³ Sb=0.49 IN³
Average EI = 1,568,000 lb - in² (SPAN ≥ 24")

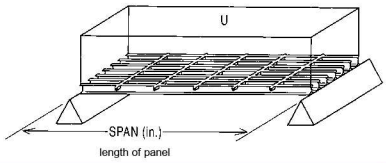
1-1/2" Deep T1215 (ADA Compliant)

# of Bars/ Ft of Width	Load Bar Depth	Open Area	Load Bar Centers	Approximate Weight
7	1-1/2"	12%	1.714"	3.2 psf



Section Properties per Ft of Width: A=3.19 IN² I=0.93 IN⁴ St=1.72 IN³ Sb=0.97 IN³
Average EI = 4,827,000 lb - in² (SPAN ≥ 24")

Pedestrian Series Uniform Load Chart



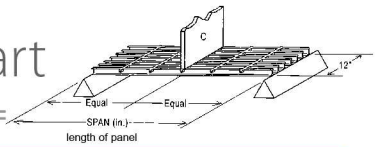
PEDESTRIAN SERIES SAFE-T-SPAN UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES										
CLEAR SPAN (in)	STYLE	LOAD (psf)							MAXIMUM RECOMMENDED LOAD (psf)	ULTIMATE CAPACITY (psf)
		50	100	200	300	500	1,000	2,000		
12	T3810	<.01	<.01	<.01	<.01	0.01	0.03	0.06	2730	5460
	T3815	<.01	<.01	<.01	<.01	0.01	0.01	0.03	4220	8440
	T2510	<.01	<.01	<.01	<.01	0.01	0.02	0.05	3280	6560
	T2515	<.01	<.01	<.01	<.01	0.01	0.01	0.02	5060	10120
	T1210	<.01	<.01	<.01	<.01	0.01	0.02	0.04	4590	9180
	T1215	<.01	<.01	<.01	<.01	0.01	0.01	0.02	5060	10120
18	T3810	<.01	0.01	0.02	0.04	0.06	0.12	—	1820	3640
	T3815	<.01	<.01	0.01	0.01	0.02	0.05	0.10	2810	5620
	T2510	<.01	0.01	0.02	0.03	0.05	0.10	0.20	2180	4360
	T2515	<.01	<.01	0.01	0.01	0.02	0.04	0.08	3380	6760
	T1210	<.01	<.01	0.01	0.03	0.04	0.09	0.18	3060	6120
	T1215	<.01	<.01	0.01	0.01	0.02	0.04	0.07	3940	7880
24	T3810	0.02	0.03	0.07	0.10	0.17	034	—	1370	2740
	T3815	0.01	0.01	0.02	0.04	0.06	0.12	0.24	2110	4220
	T2510	0.01	0.03	0.06	0.08	0.14	0.28	—	1640	3280
	T2515	<.01	0.01	0.02	0.03	0.05	0.10	0.20	2530	5060
	T1210	0.01	0.02	0.05	0.07	0.12	0.24	0.48	2290	4580
	T1215	<.01	0.01	0.02	0.03	0.04	0.09	0.17	2950	5900
30	T3810	0.04	0.08	0.16	0.24	0.40	—	—	1090	2180
	T3815	0.01	0.03	0.06	0.08	0.14	0.28	—	1690	3380
	T2510	0.03	0.07	0.13	0.20	0.33	—	—	1310	2620
	T2515	0.01	0.02	0.05	0.07	0.12	0.23	0.47	2030	4060
	T1210	0.03	0.06	0.11	0.17	0.29	—	—	1840	3680
	T1215	0.01	0.02	0.04	0.06	0.10	0.20	0.40	2360	4720
36	T3810	0.08	0.16	0.32	0.49	—	—	—	860	1720
	T3815	0.03	0.06	0.11	0.17	0.28	—	—	1410	2820
	T2510	0.07	0.14	0.27	0.41	—	—	—	1040	2080
	T2515	0.02	0.05	0.09	0.14	0.23	046	—	1690	3380
	T1210	0.06	0.11	0.23	0.35	—	—	—	1450	2900
	T1215	0.02	0.04	0.08	0.12	0.20	0.40	—	1970	3940
42	T3810	0.15	0.30	—	—	—	—	—	630	1260
	T3815	0.05	0.10	0.20	0.30	—	—	—	1100	2200
	T2510	0.12	0.25	0.50	—	—	—	—	760	1520
	T2515	0.04	0.08	0.17	0.25	0.41	—	—	1320	2640
	T1210	0.11	0.21	0.43	—	—	—	—	1060	2120
	T1215	0.04	0.07	0.14	0.21	0.36	—	—	1540	3080
48	T3810	0.25	0.50	—	—	—	—	—	490	980
	T3815	0.08	0.17	0.33	—	—	—	—	840	1680
	T2510	0.21	0.42	—	—	—	—	—	580	1160
	T2515	0.07	0.14	0.28	0.42	—	—	—	1010	2020
	T1210	0.18	0.36	—	—	—	—	—	820	1640
	T1215	0.06	0.12	0.24	0.36	—	—	—	1180	2360
54	T3815	0.13	0.26	—	—	—	—	—	670	1340
	T2515	0.11	0.22	0.44	—	—	—	—	800	1600
	T1215	0.09	0.19	0.38	—	—	—	—	930	1860
60	T3815	0.20	0.40	—	—	—	—	—	540	1080
	T2515	0.16	0.33	—	—	—	—	—	650	1300
	T1215	0.14	0.28	—	—	—	—	—	760	1520
66	T3815	0.29	—	—	—	—	—	—	450	900
	T2515	0.24	0.48	—	—	—	—	—	540	1080
	T1215	0.21	0.41	—	—	—	—	—	620	1240
72	T3815	0.41	—	—	—	—	—	—	370	740
	T2515	0.34	—	—	—	—	—	—	450	900
	T1215	0.29	—	—	—	—	—	—	520	1040

IMPORTANT: Installation should provide for fully supported abutments of grating panels. Otherwise higher deflection values may be experienced, and tripping hazards may occur. Stub bars should not be less than 1" in clip attachment areas. Safe Span pedestrian grating load bars at platform edges should be full supported.

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. Walking loads, typically 50-65 PSF maximum are recommended for pedestrian traffic. Deflections for worker comfort are typically limited to the lesser of 3/8" or CLEAR SPAN divided by 125; for a firmer feel, limit deflection to the lesser of 1/4" or CLEAR SPAN divided by 200.
4. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to the ASCE Structural Plastics Design Manual.
5. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

Pedestrian Series Concentrated Line Load Chart



PEDESTRIAN SERIES SAFE-T-SPAN CONCENTRATED LINE LOAD TABLE - DEFLECTIONS IN INCHES

CLEAR SPAN (in)	STYLE	LOAD (LBS/FT of Width) 50	100	200	300	500	1,000	2,000	MAXIMUM RECOMMENDED LOAD (lbs/ft)	ULTIMATE CAPACITY (lbs/ft)
12	T3810	<.01	<.01	<.01	0.01	0.02	0.05	0.09	2730	5460
	T3815	<.01	<.01	<.01	0.01	0.01	0.02	0.04	4220	8440
	T2510	<.01	<.01	<.01	0.01	0.02	0.04	0.08	3280	6560
	T2515	<.01	<.01	<.01	0.01	0.01	0.02	0.04	5060	10120
	T1210	<.01	<.01	<.01	<.01	0.01	0.04	0.06	4590	9180
	T1215	<.01	<.01	<.01	<.01	0.01	0.02	0.03	5900	11800
18	T3810	<.01	0.01	0.03	0.04	0.07	0.13	0.26	2590	5180
	T3815	<.01	0.01	0.01	0.02	0.03	0.05	0.10	4220	8440
	T2510	<.01	0.01	0.02	0.03	0.05	0.11	0.22	3100	6200
	T2515	<.01	<.01	0.01	0.01	0.02	0.04	0.09	5060	10120
	T1210	<.01	0.01	0.02	0.03	0.05	0.09	0.19	4350	8700
	T1215	<.01	<.01	0.01	0.01	0.02	0.04	0.07	5900	11800
24	T3810	0.01	0.03	0.05	0.08	0.13	0.27	—	1940	3880
	T3815	<.01	0.01	0.02	0.03	0.05	0.09	0.19	3370	6740
	T2510	0.01	0.02	0.04	0.07	0.11	0.22	0.45	2330	4660
	T2515	<.01	0.01	0.02	0.02	0.04	0.08	0.16	4040	8080
	T1210	0.01	0.02	0.04	0.06	0.09	0.19	0.38	3260	6520
	T1215	<.01	<.01	0.01	0.02	0.03	0.07	0.14	4720	9440
30	T3810	0.03	0.05	0.10	0.15	0.26	—	—	1550	3100
	T3815	0.01	0.03	0.04	0.05	0.09	0.18	0.36	2700	5400
	T2510	0.02	0.04	0.09	0.13	0.21	0.43		1860	3720
	T2515	0.01	0.01	0.03	0.04	0.07	0.15	0.30	3230	6460
	T1210	0.02	0.04	0.07	0.11	0.19	0.36	—	2610	5220
	T1215	0.01	0.01	0.03	0.04	0.06	0.13	0.25	3770	7540
36	T3810	0.04	0.09	0.17	0.26	0.43	—	—	1290	2580
	T3815	0.01	0.03	0.06	0.09	0.15	0.30	—	2250	4500
	T2510	0.04	0.07	0.14	0.22	0.36	—	—	1550	3100
	T2515	0.01	0.02	0.05	0.07	0.12	0.25	0.49	2700	5400
	T1210	0.03	0.06	0.12	0.19	0.31	—	—	2170	4340
	T1215	0.01	0.02	0.04	0.06	0.11	0.21	0.42	31470	6280
42	T3810	0.07	0.14	0.27	0.41	—	—	—	1110	2220
	T3815	0.02	0.09	0.09	0.14	0.23	0.45	—	1930	3860
	T2510	0.06	0.11	0.23	0.34	—	—	—	1330	2660
	T2515	0.02	0.04	0.08	0.11	0.19	0.38	—	2310	4620
	T1210	0.05	0.10	0.19	0.29	0.49	—	—	1860	3720
	T1215	0.02	0.03	0.06	0.10	0.16	0.32	—	2700	5400
48	T3810	0.10	0.20	0.40	—	—	—	—	970	1940
	T3815	0.03	0.07	0.13	0.20	0.33	—	—	1680	3360
	T2510	0.08	0.17	0.33	0.50	—	—	—	1160	2320
	T2515	0.03	0.06	0.11	0.17	0.28	—	—	2020	4040
	T1210	0.07	0.14	0.29	0.43	—	—	—	1630	3260
	T1215	0.02	0.05	0.10	0.14	0.24	0.48	—	2360	4720
54	T3815	0.05	0.09	0.19	0.28	0.47	—	—	1500	3000
	T2515	0.04	0.08	0.16	0.23	0.39	—	—	1800	3600
	T1215	0.03	0.07	0.13	0.20	0.33	—	—	2100	4200
60	T3815	0.06	0.13	0.25	0.38	—	—	—	1350	2700
	T2515	0.05	0.10	0.21	0.31	—	—	—	1620	3240
	T1215	0.04	0.09	0.18	0.27	0.45	—	—	1890	3780
66	T3815	0.08	0.17	0.33	—	—	—	—	1230	2460
	T2515	0.07	0.14	0.28	0.42	—	—	—	1470	2940
	T1215	0.06	0.12	0.24	0.36	—	—	—	1720	3440
72	T3815	0.11	0.22	0.43	—	—	—	—	1120	2240
	T2515	0.09	0.18	0.36	—	—	—	—	1350	2700
	T1215	0.08	0.15	0.31	0.46	—	—	—	1500	3140

IMPORTANT: Installation should provide for fully supported abutments of grating panels. Otherwise higher deflection values may be experienced, and tripping hazards may occur. Stub bars should not be less than 1" in clip attachment areas. Safe-T-Span pedestrian grating load bars at platform edges should be full supported.

NOTES:

1. The designer should not exceed the MAX RECOMMENDED LOAD at any given span. MAX RECOMMENDED LOAD represents a 2:1 factor of safety on ULTIMATE CAPACITY.
2. ULTIMATE CAPACITY represents a complete and total failure of the grating. Values are provided to illustrate the reserve strength of the grating at a given span and are NOT to be used for design. Functionality of grating is limited to MAX RECOMMENDED LOAD.
3. Walking loads, typically 50-65 PSF maximum are recommended for pedestrian traffic. Deflections for worker comfort are typically limited to the lesser of 3/8" or CLEAR SPAN divided by 125; for a firmer feel, limit deflection to the lesser of 1/4" or CLEAR SPAN divided by 200.
4. The allowable loads in this table are for STATIC LOAD CONDITIONS at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of ONE-HALF the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance. For applications at elevated temperatures, consult factory. The designer is further referenced to the ASCE Structural Plastics Design Manual.
5. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.

Custom Pultruded Gratings

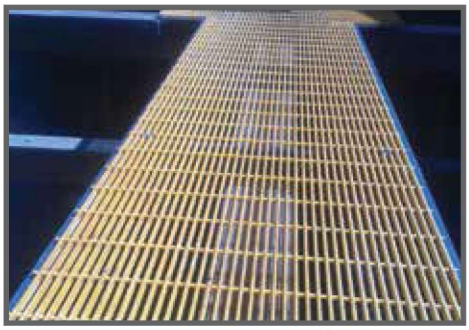
Nantong ZeAll New Materials has developed a number of specialty pultruded gratings to meet specific requirements brought to us by our customers. These grating solutions were developed in partnerships with our customers, capitalizing on Fibergrate's 20+ years of pultruded experience and the customers' intimate knowledge of their markets and applications. Fibergrate continues to work closely with our customers on a daily basis to provide the products required for new applications, so please call us about your project today!

For more information about all our custom pultruded gratings with unique depths and open areas, including details and load charts visit www.gratingfrp.com

SI Pultruded Series



HVAC Screening



Walkway Grating



Dock & Marine Gangway

The SI Series of grating is available in open areas of 60%, 73% and 83%, providing excellent airflow and light transmission. The profile of the SI Series has an appearance similar to metal grating. It is useful in areas where a close match to a steel or an aluminum profile for an existing installation is needed. SI sections with bonded rod crossbars are suitable for use in low pedestrian traffic areas.

WT Pultruded Series



WT1815 Grating (18% open area with 1-1/2" of depth)

The WT Pedestrian Series is offered in a variety of sizes with open areas including 35%, 18% or even 0% and depths of 1" or 1-1/2". The T-shaped top of the load bar provides maximum surface area underfoot, thus the most comfortable walking surface and a smoother surface for two-wheel moving equipment. These designs are excellent for areas with high traffic and light hand trucks or wheeled carts. WT00 provides a cost effective solid deck surface.

Safe Span Industrial & Pedestrian Stair Treads

Slip resistant and non conductive Safe Span pultruded stair treads offer the same level of safety, strength and corrosion resistance as other Fibergrate pultruded fiberglass products. Designed for use in applications where wider support spans are required, Safe Span pultruded stair treads for industrial and pedestrian applications are available in 1", 1-1/2" and 2" depths in the ISOFR and VEFR resin systems. Fibergrate's I6015 and I4015 1-1/2" deep treads are also available in the phenolic resin system.



Industrial Stair Tread



Load and 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 (60% Open)	250		.03	.08	.14	.22	.34	.46
	500		.07	.15	.28	.44	.68	.92
1-1/2" Deep, I6015 (60% Open)	250		.01	.02	.04	.06	.09	.13
	500		.02	.04	.08	.11	.18	.26
2" Deep T5020 (50% Open)	250		.01	.02	.03	.04	.06	.09
	500		.02	.04	.06	.09	.12	.18
1" Deep I4010 (40% Open)	250		.02	.05	.10	.16	.24	.33
	500		.05	.11	.20	.32	.49	.65
1-1/2" Deep, I4015 (40% Open)	250		.01	.01	.03	.04	.06	.09
	500		.02	.03	.05	.07	.12	.17
2" Deep, T3320 (33% Open)	250		.01	.01	.02	.03	.05	.07
	500		.02	.03	.04	.06	.09	.14
1" Deep, T1210 (12% Open)	250		.06	.13	.19	.26	.37	.47
	500		.10	.22	.34	.46	—	—
1-1/2" Deep, T1215 (12% Open)	250		.05	.07	.07	.11	.15	.18
	500		.08	.12	.16	.20	.28	.36
1" Deep, T2510 (25% Open)	250		.05	.13	.20	.27	.39	.50
	500		.09	.23	.37	.50	—	—
1-1/2" Deep, T2515 (25% Open)	250		.03	.06	.09	.12	.15	.18
	500		.05	.11	.16	.21	.28	.35
1" Deep, T3810 (38% Open)	250		.06	.15	.23	.32	.47	—
	500		.09	.25	.41	—	—	—
1-1/2" T3815 (38% Open)	250		.03	.06	.09	.12	.18	.23
	500		.05	.11	.17	.23	.34	.45

NOTES:

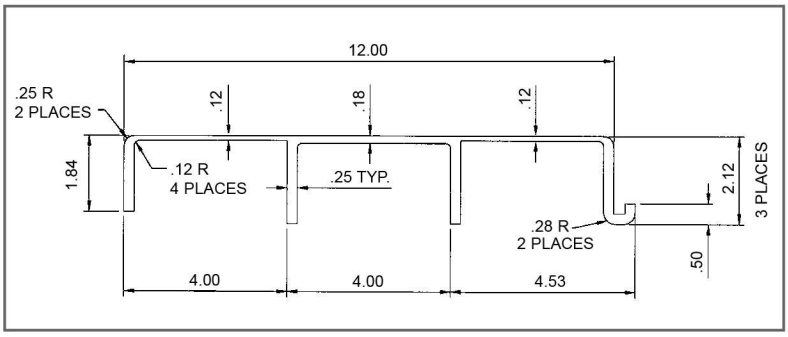
1. It is suggested that stair tread deflection be limited to SPAN/150. Deflections based on this ratio are provided at the top of the table.
2. Deflection in the body of the table are for concentrated loads of both 250 lbs. and 500 lbs. A concentrated load is applied at the center of the tread, over 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.

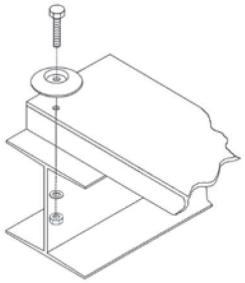
Interlocking Flooring



Used in a wide range of industrial and commercial applications, ZeAll made interlocking pultruded flooring panels provide a unique combination of durability, easy install, and low maintenance.TheFlooring is designed to be easily installed with sections snapping together more than three times faster than conventional flooring and can be disassembled for transporting.The flooring is available with a smooth solid top and is ADA compliant. It can also be gritted to provide a slip resistant surface.

Standard Smooth Solid Details





Type W Hold-Down Clips are recommended to secure Dynadeck panels to structural supports in order to eliminate potential damage to the panel.

Load / Deflection Information

SPAN	U/C	100 lb	200 lb	300 lb	500 lb	1000 lb	2000 lb
2 ft	ΔU	.010	.018	.029	.049	.097	.194
	ΔC	.008	.015	.024	.039	.079	.158
3 ft	ΔU	.035	.070	.105	.175	.350	—
	ΔC	.019	.038	.057	.095	.190	.380
4 ft	ΔU	.111	.222	.333	.555	1.110	—
	ΔC	.045	.090	.135	.225	.450	.900
5 ft	ΔU	.270	.540	.810	1.350	—	—
	ΔC	.068	.175	.263	.438	.876	—
6 ft	ΔU	.562	1.124	1.686	—	—	—
	ΔC	.151	.302	.453	.755	1.510	—

U – Uniform Load (lbs./ft.)
ΔU – Uniform Load Deflection (in.)
C– Concentrated Load (lbs./ft at center of span)
ΔC– Concentrated Load Deflection (in.)

Applications

- Cooling Tower Fan Decks
- Cooling Tower Access Walkways
- Roofing Walkways
- Odor Containment Trench Covers
- Offshore Platform Protective Walls

Resins

- ISOFR - Dark Gray (Standard), Flame Spread of 25 or Less
- VEFR - Beige, Flame Spread of 25 or Less

Surfaces

- Smooth Solid
- Optional Gritted Solid

Chemical Resistance Guide

Chemical Environment	% Concentration	Temp °F	ZeAllgrate Molded				Safe Span Pultruded	
			Vi-Corr®	Corvex®	FGI-AM	XFR	VEFR	ISOFR
Acetic Acid	50	MAX	C	C	C	I	C	C
Acetone	100	75	S	I	I	I	I	N
Alcohols	100	120	C	I	I	S	I	I
Alum	ALL	MAX	C	C	C	C	C	C
Aluminum Chloride	ALL	MAX	C	C	C	C	C	C
Aluminum Fluoride	20	75	C	I	I	I	I	I
Ammonium Hydroxide	30	75	C	N	N	N	I	N
Ammonium Salts-Neutral	ALL	120	C	C	C	S	C	S
Ammonium Salts-Aggressive	ALL	75	S	I	I	I	T	N
Aromatic Solvents	ALL	75	T	N	N	N	N	N
Barium Salts	ALL	MAX	C	C	C	C	C	C
Benzene	100	140	I	I	I	I	I	N
Black Liquor (Pulp Mill)	ALL	MAX	C	I	I	I	I	N
Bleach Liquor (Pulp Mill)	ALL	MAX	C	I	I	N	I	N
Calcium Hydroxide	25	MAX	C	S	S	I	S	I
Calcium Hypochlorite	ALL	MAX	C	I	I	I	I	N
Calcium Salts	ALL	MAX	C	C	C	C	C	C
Carbon Tetrachloride	100	75	C	I	I	S	S	N
Chlorinated Hydrocarbons	100	75	T	T	T	N	T	T
Chlorine Dioxide	SAT	140	C	N	N	N	S	N
Chlorine Water	SAT	120	C	I	I	I	I	N
Chlorine, Wet	SAT	MAX	C	N	N	N	N	N
Chlorobenzene	100	75	S	N	N	N	N	N
Chlorobenzene	ALL	Up to 100	C	N	N	N	N	N
Chloroform	100	75	N	N	N	N	N	N
Chromic Acid	50	140	S	S	S	N	I	N
Citric Acid	ALL	MAX	C	C	C	C	C	C
Copper Cyanide Plating	ALL	125	C	S	S	N	S	I
Copper Salts	ALL	MAX	C	C	C	C	C	C
Crude Oil (Sweet or Sour)	ALL	MAX	C	C	C	C	C	C
Dichlorobenzene	100	75	T	N	N	N	N	N
Ethers		75	T	N	N	N	N	N
Ferric Chloride	100	MAX	C	C	C	C	C	C
Ferric Salts	ALL	MAX	C	C	C	C	C	C
Fluoride Salts+HCl	ALL	75	C	S	S	I	I	N
Fluosilicic Acid	10	75	C	S	S	S	S	I
Formaldehyde	37	150	C	I	I	I	S	I
Formic Acid	25	100	C	S	S	I	S	I
Fuel (Diesel, Jet, Gasoline)	ALL	100	C	C	C	C	C	C
Glycerine	100	MAX	C	C	C	C	C	C
Green Liquor (Pulp Mill)	ALL	MAX	C	N	N	N	I	N
Hydrobromic Acid	48	MAX	S	S	S	I	I	N
Hydrochloric Acid	10	MAX	C	S	S	C	S	S
Hydrochloric Acid	30	MAX	C	S	S	I	I	I
Hydrochloric Acid (concentrated)	ALL	Up to 180	I	N	N	N	N	N
Hydrocyanic Acid	ALL	MAX	C	I	I	I	S	I
Hydrofluoric Acid	20	75	S	N	N	N	N	N
Hydrogen Peroxide	30	75	C	N	N	I	S	N
Lactic Acid	100	MAX	C	C	C	C	C	C
Lime Slurry	SAT	MAX	C	C	C	C	C	C
Lithium Chloride	SAT	MAX	N	N	N	N	N	N
Lithium Salts	ALL	MAX	C	C	C	C	T	T
Magnesium Salts	ALL	MAX	C	C	C	C	C	C
Maleic Acid	100	MAX	C	S	S	C	S	I
Mercury Chloride	100	MAX	C	C	C	C	C	C
Nickel Salts	ALL	MAX	C	C	C	C	C	C
Nitric Acid	20	120	C	S	S	I	I	I
Nitric Acid	35	100	C	N	N	I	I	N
Nitric Acid	40	Ambient	I	N	N	N	N	N
Nitric, Hydrofluoric	20:2	75	I	N	N	N	N	N
Nitrous Acid	10	75	C	C	C	C	C	C
Ozone for Sewage Treatment		100	C	C	C	C	C	C
Perchloroethylene	100	75	S	N	N	I	I	N
Phenol	10	75	C	N	N	N	I	N
Phenol	88	Ambient	S	N	N	N	N	N
Phosphoric Acid	85	MAX	C	C	C	C	C	S
Phosphoric Acid, Super	115	MAX	C	I	I	S	S	N
Potassium Hydroxide	10	120	C	I	I	N	S	N
Potassium Salts	ALL	MAX	C	C	C	C	C	C
Silver Nitrate	100	MAX	C	C	C	C	C	C
Sodium Cyanide	ALL	75	C	I	I	I	S	I
Sodium Hydroxide	50	MAX	C	I	I	N	I	N
Sodium Hydroxide	10	MAX	C	N	N	N	N	N
Sodium Hypochlorite (Stable)	10	100	C	S	S	S	S	I
Sodium Salts-Neutral	ALL	MAX	C	C	C	C	C	C
Sodium Salts-Aggressive	ALL	75	S	I	I	I	T	N
Sulfur Dioxide	SAT	MAX	C	S	S	S	S	S
Sulfuric Acid	25	MAX	C	S	S	S	S	I
Sulfuric Acid	50	MAX	C	S	S	S	S	N
Sulfuric Acid	75	100	C	I	I	I	I	N
Toluene	100	120	S	I	I	N	I	N
Trichloroethane1,1,1	ALL	75	S	I	I	I	I	N
Trisodium Phosphate	50	MAX	C	I	I	I	I	N
Water (Fresh, Salt, Moderate D.I.)	100	MAX	C	C	C	C	C	C
Wet Chlorine/Hydrochloric Acid	10-20	Up to 350	S	N	N	N	N	N
White Liquor (Pulp Mill)	ALL	MAX	C	I	I	I	S	N
Zinc Chloride Plating	ALL	75	C	S	S	S	S	N
Zinc Salts	100	MAX	C	C	C	C	C	C

C - Continuous exposure of the grating to the Chemical Environment listed at the temperature listed.
S - Frequent exposure of the grating to splashes and spills from the Chemical Environment listed with that environment at the temperature listed.
I - nfrequent exposure of the grating to splashes and spills from the Chemical Environment listed with that environment at the temperature listed and the spill immediately cleaned up or washed from the grating.
N - Not recommended for the concentrations and temperatures listed.
T - Test

Consult Fibergrate for corrosion recommendations at concentrations, temperatures or chemicals not listed in this guide.
MAX TEMP is 180°F for ViCorr and Pultruded VEFR; 150° for Corvex, FGI-AM, XFR and Pultruded ISOFR.
The information in this Corrosion Guide is correct to the best of Fibergrate's knowledge. It is based on extensive experience with fiberglass grating in corrosive applications. Because actual use conditions differ and mixtures of corrosives will occur in service, the end user must test for use under actual conditions. Fibergrate's responsibility for claims arising from breach of warranty, negligence or otherwise is limited to the purchase price of the material sold by Fibergrate. Test coupons are available upon specific request.

ZeAllGrate Product & Services



Fibergrate Molded Grating

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



Safe Span Pultruded Industrial & Pedestrian Gratings

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



Structural Shapes

ZeAllgrate offers a wide range of standard widely-used pultruded structural profiles for industrial and commercial use, including I-beams, wide flange beams, round and square tubes, bars, rods, channels, leg angles and plate.



Guardrail, Handrail & Ladder

Easily assembled from durable components or engineered and prefabricated to your specifications, square tube and round tube railing systems and safety ladder systems meet or exceed OSHA and strict building code requirements for safety and design.



Custom Composite Solutions

Combining ZeAllgrate's design, manufacturing and fabrication services allows ZeAllgrate to offer custom composite solutions to meet our client's specific requirements. Either through unique pultruded profiles or custom open molding, ZeAllgrate can help bring your vision to reality.



Design & Fabrication Services

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



Worldwide Sales & Distribution Network

Whether a customer requires a platform in a mine in South Africa to grating on an oil rig in the North Sea, or walkways in a Wisconsin cheese plant to railings at a water treatment facility in Brazil; ZeAllgrate has sales and service locations throughout the world to meet the needs and exceed the expectations of any customer.

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