






Safe-T-Span[®] High Load Capacity

High Load Capacity (HI) pultruded grating is yet another product in the arsenal of engineered fiberglass reinforced plastic (FRP) solutions by Fibergate. 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 high-glass pultruded FRP product has been engineered to carry the forklift and tractor trailer loads that traditional pultruded FRP grating products are unable to support. This heavy-duty grating is rated for up to H20 loads in all five depths. With a 47 and 58% open surface area, Fibergate's HI pultruded grating is available in 1, 1-1/2", 2", 2-1/2" and 3" depths. Standard panels consist of a fire retardant vinyl ester resin system, are dark gray in color, and have an aluminum oxide grit top surface. Fibergate's HI pultruded grating has a flame spread rating of 25 or less (when tested in accordance with ASTM E-84) and a Class 1 Fire Rating. Each HI grating is specially engineered to meet specific requirements. Contact the Fibergate 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 Fibergate engineering for design assistance.)

Allowable Load Spans

| | Wheel Load (lb) (1/2 Axle Load + 30% Impact) | Load Distribution | | Allowable Span (2,3) | | | | | Load Distribution | | Allowable Span (2,3) | | | | |
|---|---|----------------------|-----------------------|----------------------|--------|--------|--------|--------|----------------------|-----------------------|----------------------|--------|--------|--------|--------|
| | | 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 Standard Truck (4) 32,000 lb Axle Load Dual Wheels <i>(formerly AASHTO H-20)</i> | 20,800 | 20" + 2-3/8" | 8" | 0'-9" | 1'-2" | 2'-1" | 2'-5" | 3'-2" | 20" + 3" | 8" | 0'-8" | 1'-0" | 1'-9" | 1'-11" | 2'-7" |
|  Automobile Traffic 5,000 lb Vehicle 1,500 lb Load 55% Drive Axle Load | 2,220 | 8" + 2-3/8" | 8" | 1'-4" | 2'-4" | 3'-11" | 4'-9" | 5'-10" | 8" + 3" | 8" | 1'-2" | 1'-11" | 3'-3" | 3'-11" | 4'-10" |
|  5 Ton Capacity Forklift 14,400 lb Vehicle 24,400 lb Total Load 85% Drive Axle Load | 13,480 | 11" + 2-3/8" | 11" | 0'-8" | 1'-1" | 1'-9" | 2'-1" | 2'-8" | 11" + 3" | 11" | 0'-8" | 0'-11" | 1'-6" | 1'-9" | 2'-3" |
|  3 Ton Capacity Forklift 9,800 lb Vehicle 15,800 lb Total Load 85% Drive Axle Load | 8,730 | 7" + 2-3/8" | 7" | 0'-8" | 1'-1" | 1'-9" | 2'-1" | 2'-8" | 7" + 3" | 7" | 0'-7" | 0'-10" | 1'-6" | 1'-8" | 2'-2" |
|  1 Ton Capacity Forklift 4,200 lb Vehicle 6,200 lb Total Load 85% Drive Axle Load | 3,425 | 4" + 2-3/8" | 4" | 0'-9" | 1'-4" | 2'-9" | 3'-3" | 4'-3" | 4" + 3" | 4" | 0'-8" | 1'-1" | 2'-3" | 2'-7" | 3'-6" |

Notes:

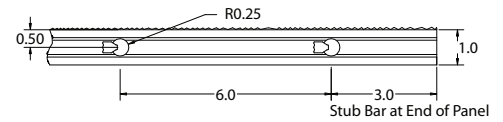
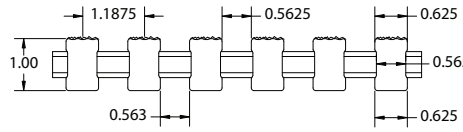
- (1) Load is carried by the grating load bars immediately under wheel + two additional load bars, one on each side of wheel.
- (2) Allowable Span is based on a 0.25" maximum deflection and a Factor of Safety of 3.0. Other criteria may be required by certain construction codes. Check code requirements to determine design criteria.
- (3) ALLOWABLE SPAN IS STRONGLY DEPENDENT ON WHEEL WIDTH AND VEHICLE WEIGHT/LOAD CAPACITY. If your application varies from the values given on this table, contact Fibergate Engineering for application assistance.
- (4) Load based on the AASHTO Standard Truck Load as defined in AASHTO LRFD Bridge Design Specifications, 2nd Ed. This does not imply that the allowable span meets the deflection requirements of this specification.

High Load Capacity Grating Details

HLC Advantages

- *High Strength*
- *Aluminum Oxide Grit Surface*
- *Slip Resistant*
- *Fire Retardant*
- *Non-Conductive*
- *Low Maintenance*
- *Corrosion Resistant*

1" Deep, HI4710

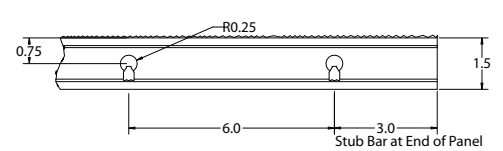
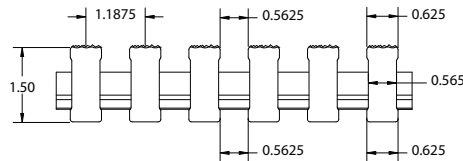


Engineering Properties per FT of Width

A=5.96 IN²/FT I=0.51 IN⁴/FT S=1.00 IN³/FT

Load Bar Depth 1"
Approx. Weight = 5.5 lb/sq ft

1-1/2" Deep, HI4715

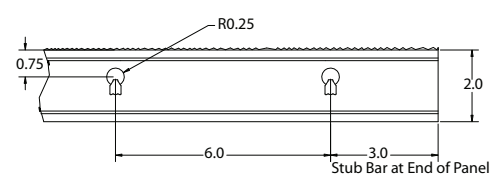
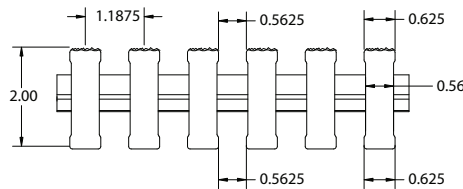


Engineering Properties per FT of Width

A=8.79 IN²/FT I=1.72 IN⁴/FT S=2.26 IN³/FT

Load Bar Depth 1-1/2"
Approx. Weight = 8.0 lb/sq ft

2" Deep, HI4720

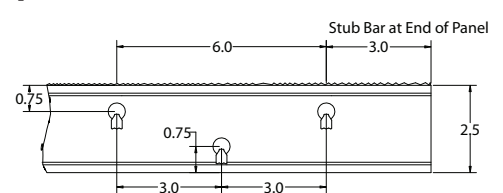
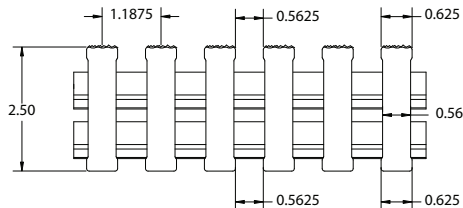


Engineering Properties per FT of Width

A=11.64 IN²/FT I=3.96 IN⁴/FT S=3.96 IN³/FT

Load Bar Depth 2"
Approx. Weight = 10.9 lb/sq ft

2-1/2" Deep, HI4725

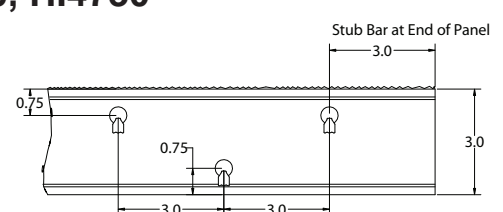
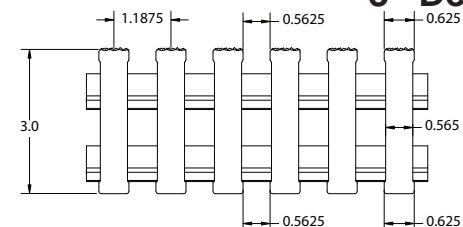


Engineering Properties per FT of Width

A=14.5 IN²/FT I=7.96 IN⁴/FT S=6.15 IN³/FT

Load Bar Depth 2-1/2"
Approx. Weight = 12.3 lb/sq ft

3" Deep, HI4730



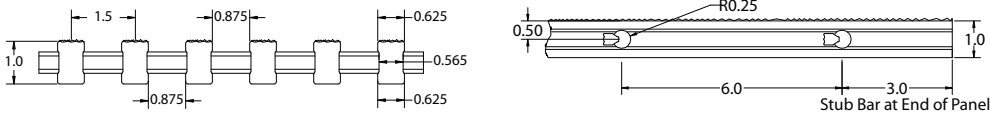
Engineering Properties per FT of Width

A=17.34 IN²/FT I=13.22 IN⁴/FT S=8.81 IN³/FT

Load Bar Depth 3"
Approx. Weight = 14.7 lb/sq ft

High Load Capacity Grating Details

1" Deep, HI5810

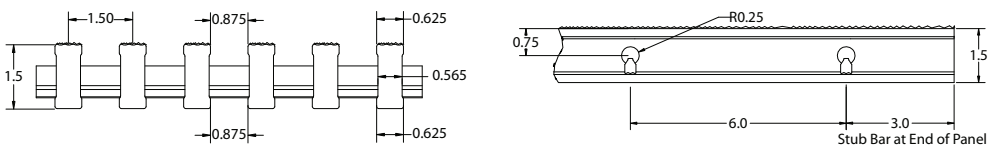


Engineering Properties per FT of Width

A=4.72 IN²/FT I=0.40 IN⁴/FT S=0.78 IN³/FT

Load Bar Depth 1"
Approx. Weight = 6.5 lb/sq ft

1-1/2" Deep, HI5815

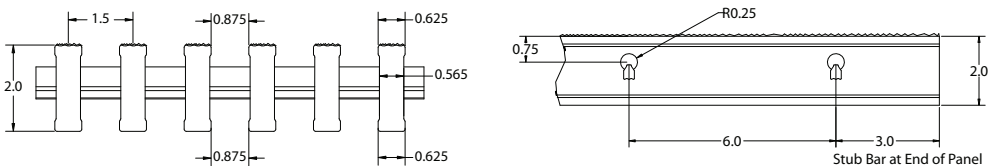


Engineering Properties per FT of Width

A=6.96 IN²/FT I=1.36 IN⁴/FT S=1.79 IN³/FT

Load Bar Depth 1-1/2"
Approx. Weight = 6.5 lb/sq ft

2" Deep, HI5820

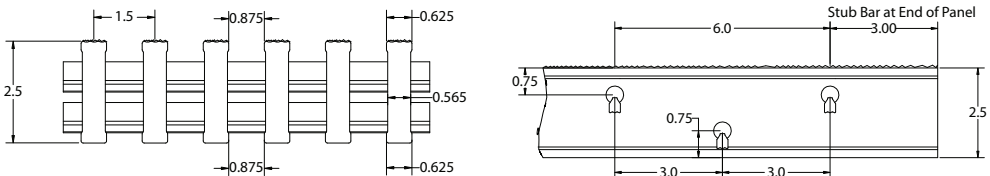


Engineering Properties per FT of Width

A=9.20 IN²/FT I=3.12 IN⁴/FT S=3.12 IN³/FT

Load Bar Depth 2"
Approx. Weight = 8.7 lb/sq ft

2-1/2" Deep, HI5825

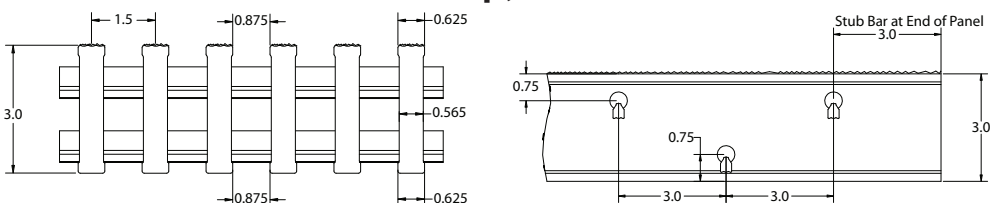


Engineering Properties per FT of Width

A=11.5 IN²/FT I=6.09 IN⁴/FT S=4.87 IN³/FT

Load Bar Depth 2-1/2"
Approx. Weight = 10.0 lb/sq ft

3" Deep, HI5830



Engineering Properties per FT of Width

A=13.73 IN²/FT I=10.46 IN⁴/FT S=6.98 IN³/FT

Load Bar Depth 3"
Approx. Weight = 12.0 lb/sq ft

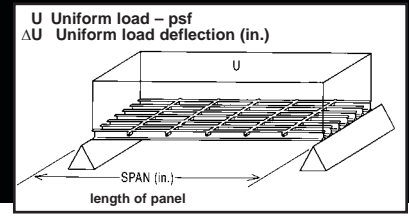
Applications

- Flooring
- Platforms
- Storage Areas
- Long Span Walkways
- Assembly Lines
- Trench Covers with Vehicular Traffic
- Ramps
- Loading Docks



Safe-T-Span High Load Capacity Pultruded Grating in drainage trenches in loading areas of a manufacturing facility in Texas

HI47 Pultruded Series Uniform Load Chart



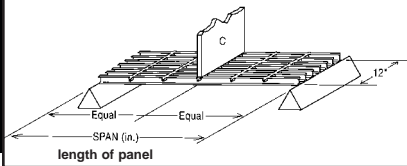
HI47 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES

| CLEAR SPAN (in) | STYLE | LOAD (psf) | | | | | | | | | | MAXIMUM RECOMMENDED 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 | 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 | 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 | 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 | 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 | 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:

- 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.
- 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.
- 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.
- Fibergate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergate Engineering.
- Fibergate 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.
- All gratings were tested in accordance with the proposed standard of the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association (ACMA).

C Concentrated line load – lbs/ft of width
 ΔC Concentrated line load deflection (in.)



HI47 Pultruded Series Concentrated Line Load Chart

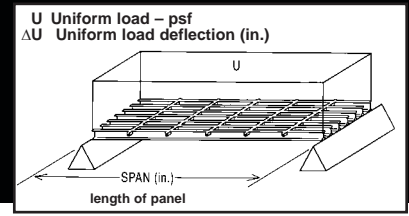
HI47 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

| CLEAR SPAN (in) | STYLE | LOAD (LBS/FT of Width) | | | | | | | | | | MAXIMUM RECOMMENDED LOAD (lbs/ft) | ULTIMATE CAPACITY (lbs/ft) |
|-----------------|--------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|----------------------------|
| | | 100 | 200 | 300 | 500 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | | |
| 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 | <0.01 | 0.03 | 0.03 | 0.07 | 0.10 | 0.13 | 0.16 | 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 | 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 | 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 | 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 | 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 | 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 | 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:

- 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.
- 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.
- 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.
- Fibergate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergate Engineering.
- Fibergate 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.
- All gratings were tested in accordance with the proposed standard of the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association (ACMA).

HI58 Pultruded Series Uniform Load Chart



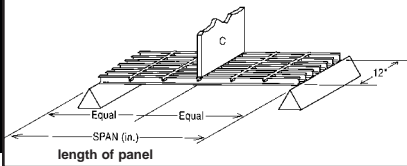
HI58 PULTRUDED SERIES UNIFORM LOAD TABLE - DEFLECTIONS IN INCHES

| CLEAR SPAN (in) | UNIFORM LOAD (psf) | | | | | | | | | | | MAXIMUM RECOMMENDED LOAD (psf) | ULTIMATE CAPACITY (psf) |
|-----------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------------------|-------------------------|
| | STYLE | 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 | 23500 | 42600 |
| | HI5830 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 | 29600 | 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 | 0.06 | 0.06 | 0.07 | 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 | 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 | 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 | 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 | 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 | 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:

- 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.
- 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.
- 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.
- Fibergate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergate Engineering.
- Fibergate 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.
- All gratings were tested in accordance with the proposed standard of the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association (ACMA).

C Concentrated line load – lbs/ft of width
 ΔC Concentrated line load deflection (in.)



HI58 Pultruded Series Concentrated Line Load Chart

HI58 PULTRUDED SERIES LINE LOAD TABLE - DEFLECTIONS IN INCHES

| CLEAR SPAN (in) | STYLE | LOAD (LBS/FT of Width) | | | | | | | | | | MAXIMUM RECOMMENDED LOAD (lbs/ft) | ULTIMATE CAPACITY (lbs/ft) |
|-----------------|--------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------------------------|----------------------------|
| | | 100 | 200 | 300 | 500 | 1000 | 2000 | 3000 | 4000 | 5000 | 6000 | | |
| 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 | 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 | 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 | 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 | 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 | 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 | 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:

- 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.
- 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.
- 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.
- Fibergate does not recommend this product for turning wheel loads. If these conditions are expected, contact Fibergate Engineering.
- Fibergate 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.
- All gratings were tested in accordance with the proposed standard of the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association (ACMA).