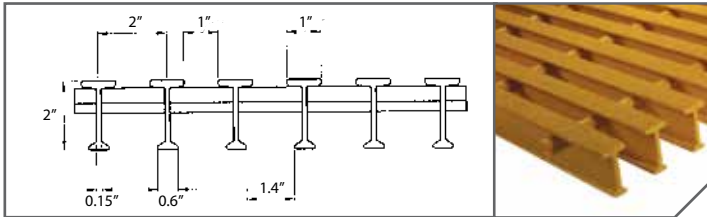


Safe-T-Span® Industrial Grating Details

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

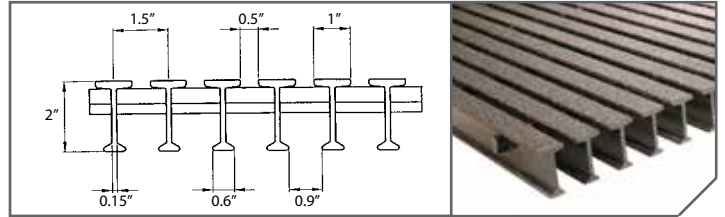


Section Properties per Ft of Width: A=3.2 IN² I=1.68 IN⁴ St=1.96 IN³ Sb=1.47 IN³
Average EI = 7,600,000 lb - in² (SPAN ≥ 24")

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

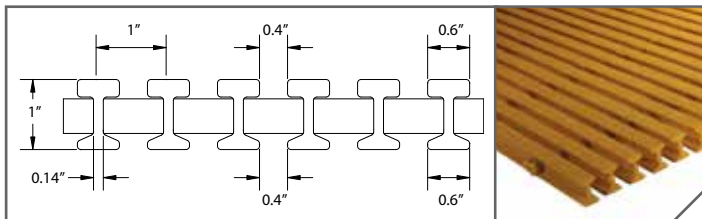


Section Properties per Ft of Width: A=4.28 IN² I=2.24 IN⁴ St=2.61 IN³ Sb=1.96 IN³
Average EI = 9,200,000 lb - in² (SPAN ≥ 24")

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

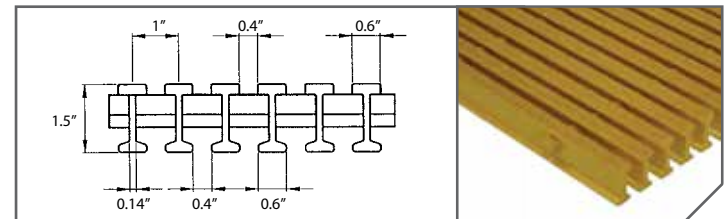


Section Properties per Ft of Width: A = 3.96 IN² I = 0.5 IN⁴ S = 0.95 IN³
Average EI = 2,500,000 lb - in² (SPAN ≥ 24")

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-T-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 Fibergrate 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}											
		Parallel to Axle (1)	Perpendicular to Axle	H13710	H13715	H13720	H13725	H13730	Parallel to Axle (1)	Perpendicular to Axle	H14710	H14715	H14720	H14725	H14730	Parallel to Axle (1)	Perpendicular to Axle	H15810	H15815	H15820	H15825	H15830
 AASHTO H-25 Truck⁴ 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"	2'-4"	2'-9"	3'-4"	25" + 3"	25"	1'-3"	1'-10"	2'-3"	2'-7"	3'-2"
 AASHTO H-20 Truck⁴ 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 Truck⁴ 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 Truck⁴ 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 Truck⁴ 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 Vehicles⁵ 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"	3'-4"	4'-1"	9" + 3"	9"	1'-3"	2'-0"	2'-7"	3'-2"	3'-10"
 5 Ton Capacity Forklift⁵ 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 Forklift⁵ 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 Forklift⁵ 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:

- Load is carried by the grating load bars immediately under wheel + two additional load bars, one on each side of wheel.
- 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.
- 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 Fibergrate Engineering for assistance.
- 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.
- 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

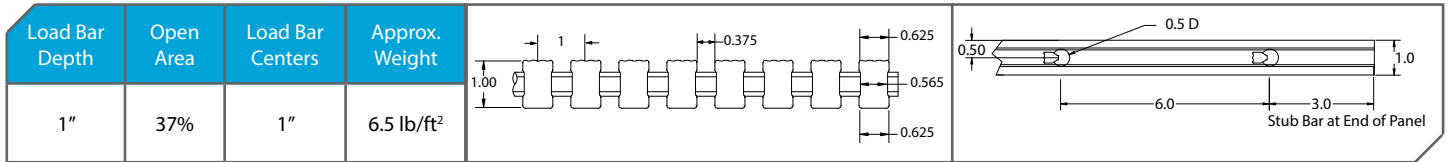


High Load Capacity Grating Details

Grating Details

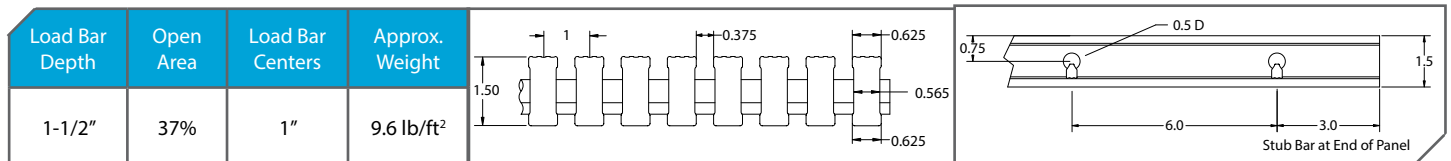
HI37 Series 

1" Deep HI3710



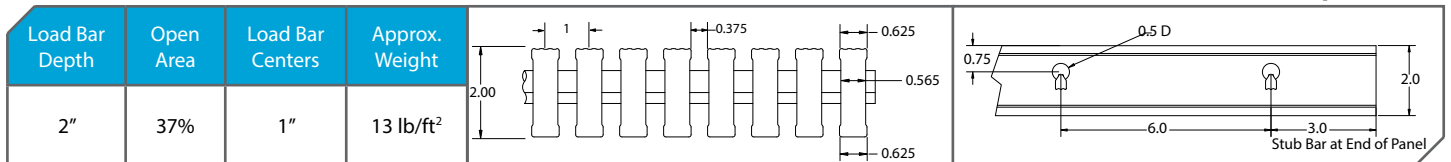
Section Properties per Ft of Width: A=7.08 IN² I=0.59 IN⁴/FT S=1.19 IN³

1-1/2" Deep HI3715



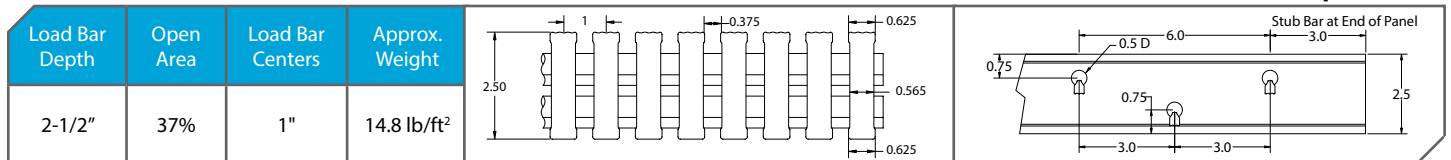
Section Properties per Ft of Width: A=10.44 IN² I=1.99 IN⁴/FT S=2.66 IN³/FT

2" Deep HI3720



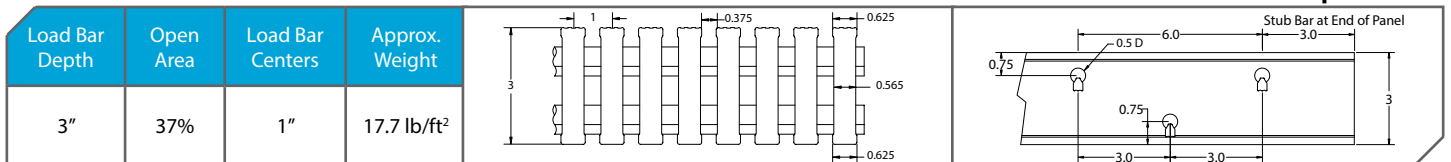
Section Properties per Ft of Width: A=13.82 IN² I=4.7 IN⁴/FT S=4.7 IN³/FT

2-1/2" Deep HI3725



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

3" Deep HI3730



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

NOTES:

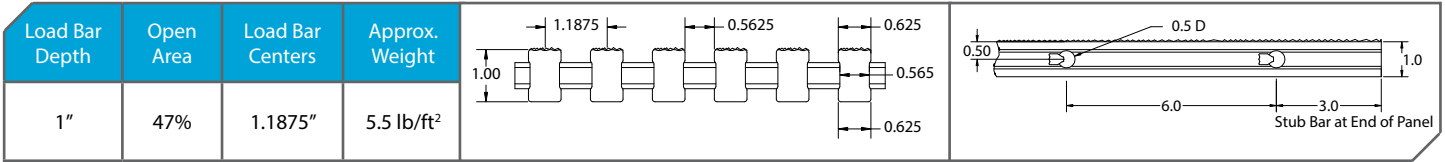
1. All pultruded grating panels are assembled to size from stocked bar lengths of 20' and 24' to minimize waste and cost. Maximum panel widths (tie bar length) are 4' nominal.
2. Available panel sizes are dependent upon application requirements and individual panel weight considerations because this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

High Load Capacity Grating Details

Grating Details

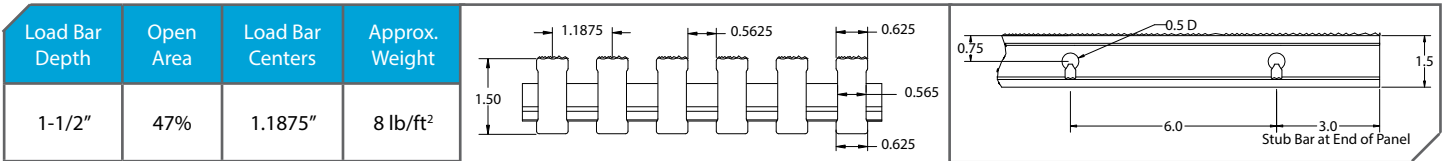
HI47 Series

1" Deep HI4710



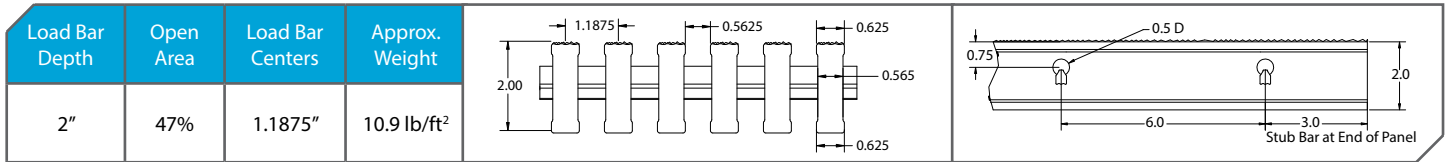
Section Properties per Ft of Width: $A=5.96 \text{ IN}^2$ $I=0.51 \text{ IN}^4/\text{FT}$ $S=1 \text{ IN}^3/\text{FT}$

1-1/2" Deep HI4715



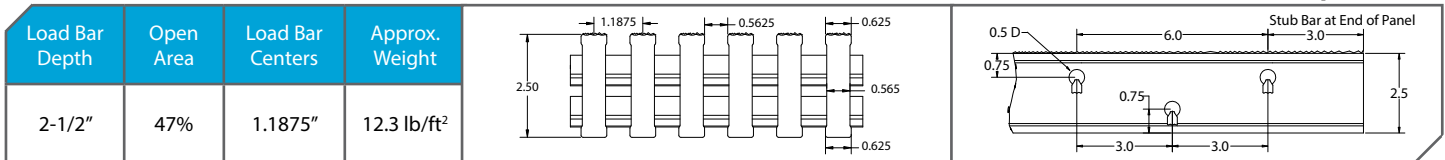
Section Properties per Ft of Width: $A=8.79 \text{ IN}^2$ $I=1.72 \text{ IN}^4/\text{FT}$ $S=2.26 \text{ IN}^3/\text{FT}$

2" Deep HI4720



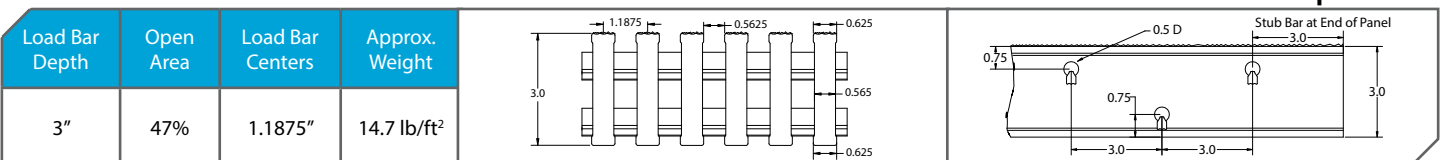
Section Properties per Ft of Width: $A=11.64 \text{ IN}^2$ $I=3.96 \text{ IN}^4/\text{FT}$ $S=3.96 \text{ IN}^3/\text{FT}$

2-1/2" Deep HI4725



Section Properties per Ft of Width: $A=14.5 \text{ IN}^2$ $I=7.96 \text{ IN}^4/\text{FT}$ $S=6.15 \text{ IN}^3/\text{FT}$

3" Deep HI4730



Section Properties per Ft of Width: $A=17.34 \text{ IN}^2$ $I=13.22 \text{ IN}^4/\text{FT}$ $S=8.81 \text{ IN}^3/\text{FT}$

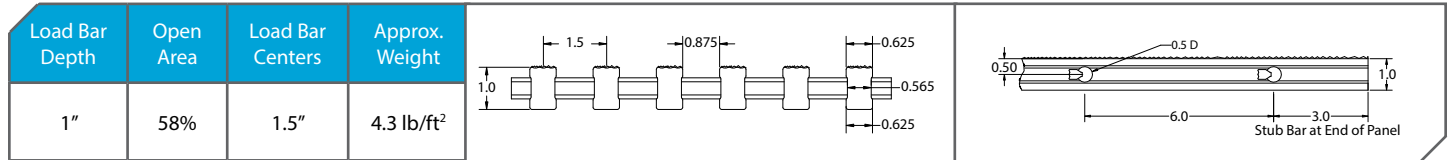
- NOTES:**
1. All pultruded grating panels are assembled to size from stocked bar lengths of 20' and 24' to minimize waste and cost. Maximum panel widths (tie bar length) are 4' nominal.
 2. Available panel sizes are dependent upon application requirements and individual panel weight considerations because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

High Load Capacity Grating Details

Grating Details

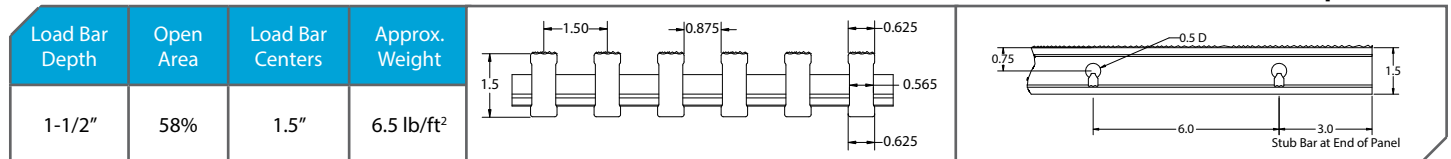
HI58 Series

1" Deep HI5810



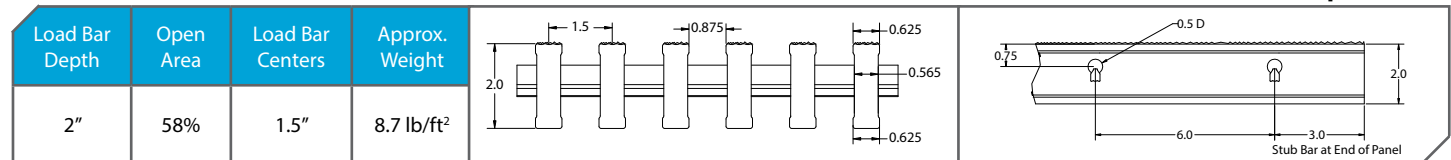
Section Properties per Ft of Width: A=4.72 IN² I=0.4 IN⁴/FT S=0.78 IN³/FT

1-1/2" Deep HI5815



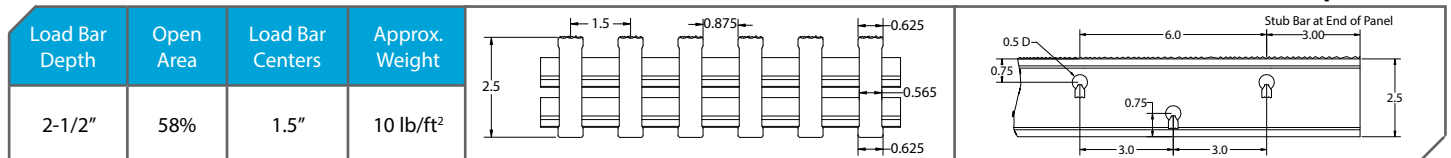
Section Properties per Ft of Width: A=6.96 IN² I=1.36 IN⁴/FT S=1.79 IN³/FT

2" Deep HI5820



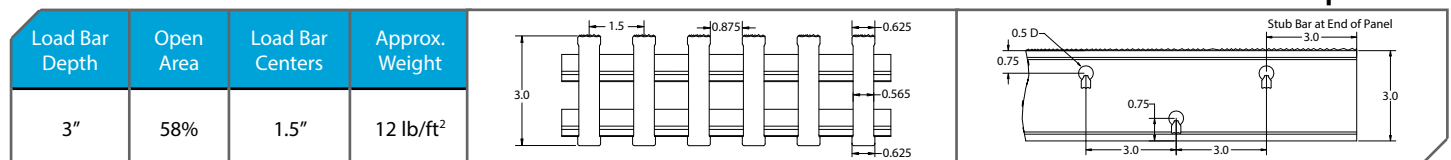
Section Properties per Ft of Width: A=9.2 IN² I=3.12 IN⁴/FT S=3.12 IN³/FT

2-1/2" Deep HI5825



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

3" Deep HI5830



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.