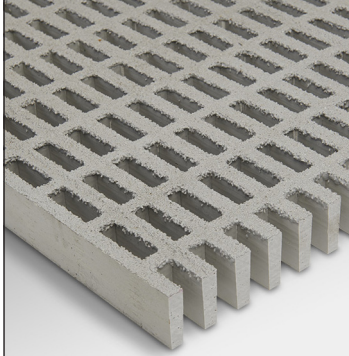
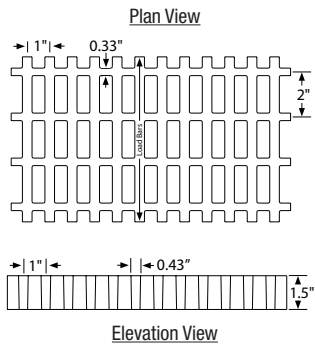




GRATING PACIFIC

MOLDED HLC GRATING DETAILS & LOAD TABLES

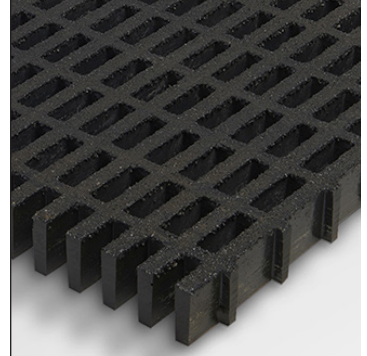
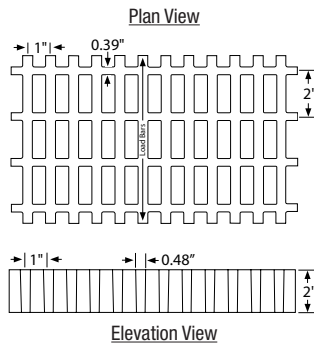
HLC 1-1/2" Deep x 1" x 2" Rectangular Mesh



# of Bars/ Ft of Width	Load Bar Width	Open Area	Load Bar Centers	Approx. Wt.
12	0.43"	48%	1"	6.2 psf

Section Properties per Ft of Width: A = 7.45 IN² I = 1.39 IN⁴ S = 1.80 IN³

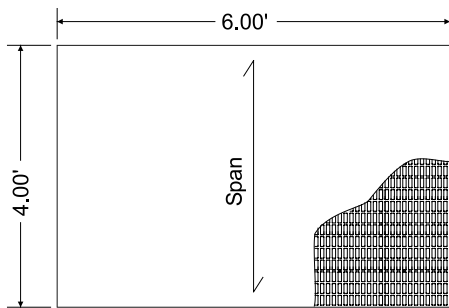
HLC 2" Deep x 1" x 2" Rectangular Mesh



# of Bars/ Ft of Width	Load Bar Width	Open Area	Load Bar Centers	Approx. Wt.
12	0.48"	48%	1"	8.4 psf

Section Properties per Ft of Width: A = 10.26 IN² I = 3.4 IN⁴ S = 3.27 IN³

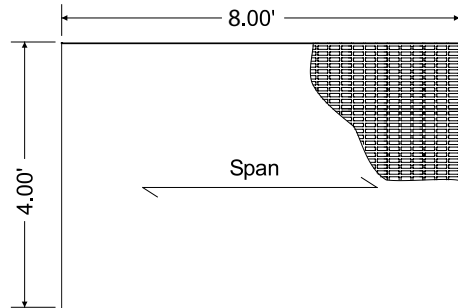
6' x 4' Finished Panel Size



NOTES:

Load carrying bars are oriented across the narrow (4') dimension of the panel. Panels furnished with closed bars all sides.

4' x 8' Finished Panel Size



NOTES:

Load carrying bars are oriented across the long (8') dimension of the panel. Panels furnished with closed bars all sides.

Allowable Spans for Vehicular Loads

	Wheel Load (lb) - 1/2 Axle Load + 30% Impact	Load Distribution		Allowable Span ^{2,3}	
		Parallel to Axle ¹	Perpendicular to Axle	1-1/2" Deep HLC Molded Grating	2" Deep HLC Molded Grating
AASHTO Standard Truck / 32,000 lb Axle Load Dual Wheels (*formerly AASHTO H-20)	20,800	20" + 4"	8"	1'-2"	1'-5"
Automobile Traffic / 5,000 lb Vehicle 1,500 lb Load / 55% Drive Axle Load	2,200	8" + 4"	8"	2'-2"	2'-8"
5 ton Capacity Forklift / 14,400 lb Vehicle 24,400 lb Total Load / 85% Drive Axle Load	13,480	11" + 4"	11"	1'-1"	1'-5"
3 Ton Capacity Forklift / 9,800 lb Vehicle 15,800 lb Total Load / 85% Drive Axle Load	8,730	7" + 4"	7"	1'-0"	1'-4"
1 Ton Capacity Forklift / 4,200 lb Vehicle 6,200 lb Total Load / 85% Drive Axle Load	3,425	4" + 4"	4"	1'-7"	2'-1"

NOTES:

- Load is carried by the grating load bars immediate under wheel + four additional load bars adjacent to wheel.
- Allowable Span is based on a 0.25" maximum deflection and a Factor of Safety of 2.5. 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 on this table, contact Fibergrate Engineering for application assistance.
- 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.



GRATING PACIFIC

MOLDED HLC GRATING DETAILS & LOAD TABLES

Uniform Load Table - Deflection in Inches															
Span (Inches)	Style		Uniform Load (psf)										Maximum Recommended Load (psf)	Ultimate Capacity (psf)	
	Depth (in)	Mesh (in)	100	200	300	400	500	600	700	800	900	1000			
12"	1-1/2	1 x 2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	28000	70000
	2	1 x 2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	31200	78000
18"	1-1/2	1 x 2	<0.01	<0.01	0.01	0.01	0.02	0.02	0.02	0.03	0.03	0.03	0.03	12400	31000
	2	1 x 2	<0.01	<0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	14500	36200
24"	1-1/2	1 x 2	0.01	0.02	0.03	0.04	0.05	0.06	0.08	0.09	0.10	0.11	0.11	6800	17000
	2	1 x 2	0.01	0.01	0.02	0.02	0.03	0.04	0.04	0.05	0.05	0.06	0.06	9000	22500
30"	1-1/2	1 x 2	0.03	0.05	0.08	0.11	0.13	0.16	0.18	0.21	0.24	0.26	0.26	4300	10700
	2	1 x 2	0.01	0.03	0.04	0.06	0.07	0.09	0.10	0.11	0.13	0.14	0.14	5800	14500
36"	1-1/2	1 x 2	0.05	0.10	0.16	0.21	0.26	0.31	0.37	0.42	0.47	—	—	3000	7500
	2	1 x 2	0.03	0.06	0.09	0.12	0.15	0.18	0.21	0.24	0.27	0.30	0.30	4000	10000
42"	1-1/2	1 x 2	0.10	0.19	0.29	0.39	0.48	—	—	—	—	—	—	2200	5500
	2	1 x 2	0.06	0.11	0.17	0.22	0.28	0.33	0.39	0.44	0.50	—	—	2900	7200

Concentrated Line Load Table - Deflection in Inches															
Span (Inches)	Style		Concentrated Line Load (lb/ft of width)										Maximum Recommended Load (lb/ft)	Ultimate Capacity (lb/ft)	
	Depth (in)	Mesh (in)	100	200	300	500	1000	2000	3000	4000	5000	6000			
12"	1-1/2	1 x 2	<0.01	<0.01	<0.01	<0.01	0.01	0.03	0.04	0.06	0.07	0.08	0.08	14000	35000
	2	1 x 2	<0.01	<0.01	<0.01	<0.01	0.01	0.02	0.02	0.03	0.04	0.05	0.05	15600	39000
18"	1-1/2	1 x 2	<0.01	<0.01	0.01	0.02	0.04	0.07	0.11	0.15	0.18	0.22	0.22	9300	23200
	2	1 x 2	<0.01	<0.01	0.01	0.01	0.02	0.04	0.06	0.08	0.11	0.13	0.13	10800	27000
24"	1-1/2	1 x 2	<0.01	0.02	0.03	0.04	0.09	0.17	0.26	0.34	0.43	—	—	6800	17000
	2	1 x 2	<0.01	0.01	0.01	0.02	0.05	0.09	0.14	0.19	0.24	0.28	0.28	9000	22500
30"	1-1/2	1 x 2	0.02	0.03	0.05	0.08	0.17	0.34	—	—	—	—	—	5400	13500
	2	1 x 2	0.01	0.02	0.03	0.05	0.09	0.18	0.28	0.37	0.46	—	—	7200	18000
36"	1-1/2	1 x 2	0.03	0.06	0.08	0.14	0.28	—	—	—	—	—	—	4500	11200
	2	1 x 2	0.02	0.03	0.05	0.08	0.16	0.32	0.48	—	—	—	—	6000	15000
42"	1-1/2	1 x 2	0.04	0.09	0.13	0.22	0.44	—	—	—	—	—	—	3800	9500
	2	1 x 2	0.03	0.05	0.08	0.13	0.25	0.50	—	—	—	—	—	5100	12700

- NOTES:**
1. 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.
 2. 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.
 3. Grating Pacific 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.
 4. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.