

Ecograte™ Grating



Fibergrate Composite Structures is the originator of molded fiberglass reinforced plastic (FRP) grating. Fibergrate continues to lead the industry with innovative products and the ability to provide customized solutions for numerous applications and industries. In our near 50 year history, Fibergrate has provided many products to marine, recreational, and commercial customers. Now as our nation has become more knowledgeable about our marine environments, Fibergrate has made the commitment to produce products that will provide the best solution for our customer and the environment.



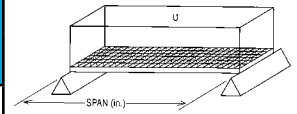
Seagrass is widely recognized as one of the most productive and valuable habitats in the shallow marine environment. Although the area of the seagrass loss associated with any individual dock is relatively small, cumulative impacts and fragmentation of seagrass beds may be significant along highly developed shorelines. With seagrass populations declining in many areas, coastal resource managers are interested in products to reduce additional dock-associated impacts to an already stressed resource.

Fibergrate's ecograte has an open area of 46% which exceeds guidelines set forth by the Army Corps of Engineers who require a minimum open area of 43%. The open area consideration is an important factor in protecting the seagrass as it allows light penetration through the dock. In addition, our golf tee-shaped bearing bars provide a minimum opening of 1/2" so it also meets the Americans with Disabilities Act (ADA) guidelines, making it an excellent choice for public area applications. Additionally, the Aquagrit surface provides a barefoot-friendly, slip resistant surface to ensure a safe deck area. Fibergrate's Ecograte products can be found at amusement parks and waterways around the world to provide a safe, long service life with low maintenance solutions in areas that are commonly known as a maintenance headache.



Uniform Load Table - Deflection in Inches

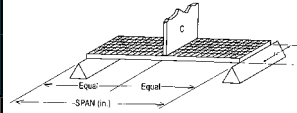
Clear Span (in)	UNIFORM LOAD (psf)											Maximum Rec. Load (psf)	Ultimate Load (psf)
	50	100	200	300	400	500	600	700	800	900	1000		
12	<0.01	<0.01	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	1850	9252
18	0.02	0.04	0.08	0.13	0.17	0.21	0.25	0.29	0.34	0.37	0.42	514	4112
24	0.06	0.12	0.24	0.36	0.48	—	—	—	—	—	—	289	2313
30	0.15	0.29	0.59	—	—	—	—	—	—	—	—	185	1480



U Uniform Load - psf
 ΔU Uniform Load Deflection - in

Concentrated Line Load Table - Deflection in Inches

Clear Span (in)	UNIFORM LOAD (lb/ft of width)							Maximum Rec. Load (lb/ft)	Ultimate Load (lb/ft)
	100	200	300	500	1000	2000	3000		
12	0.010	0.030	0.040	0.070	0.140	0.270	0.410	925	4626
18	0.040	0.090	0.130	0.220	0.450	—	—	386	3084
24	0.090	0.190	0.290	0.480	—	—	—	289	2313
30	0.190	0.370	—	—	—	—	—	231	1850
36	0.320	—	—	—	—	—	—	182	1450



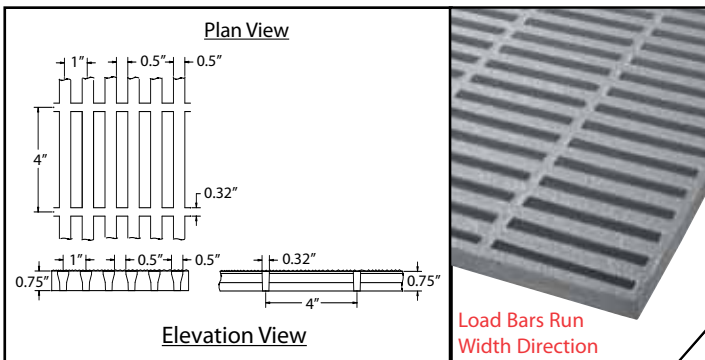
C Concen. Line Load - psf of width
 ΔC Concen. Line Load Deflection - in

- NOTES:
- Functionality of grating is limited to MAXIMUM RECOMMENDED LOAD. The designer should not exceed this MAXIMUM RECOMMENDED LOAD at any given span.
 - 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 MAXIMUM RECOMMENDED LOAD.
 - 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.
 - 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 ASCE Structural Plastics Design Manual.
 - All gratings were tested in accordance with the proposed standard of the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association (ACMA).

Details

Ecograte® 3/4" Deep x 1" x 4" Rect Mesh

# of Bars/Ft of Width	Load Bar Width	Open Area	Load Bar Centers	Approximate Weight
12	1/2"	46%	1"	2.85 psf



Section Properties per Ft of Width: A = 3.36 IN² I = 0.16 IN⁴ S = 0.375 IN³

Clips

