

# Micro-Mesh® Decking



Building the World to Last®

Fibergrate Composite Structures Inc. is the originator of molded fiberglass reinforced plastic (FRP) grating. Fibergrate continues to lead the industry in innovative products and the ability to provide customized solutions for numerous applications and industries. For five decades, Fibergrate has provided many products to marine, recreational, and commercial customers. As our nation has become more knowledgeable about our marine environments, we have committed to producing products that will provide the best solution for our customers and the environment.

Seagrasses are 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 may be significant along highly developed shorelines. With seagrass population in decline in many areas, coastal resource managers are interested in products that reduce additional dock-associated impacts to an already stressed resource.

Fibergrate's Micro-Mesh® decking has an open area from 43% to 44.4% which exceeds guidelines set forth by the U.S. Army Corps of Engineers\* who require a minimum open area of 43% for dock material. The open area consideration is an important factor in protecting the seagrass and other shallow marine habitats, as it allows light penetration through the dock.



For 1/2", 1" and 1-1/2" grating hold down, use Fibergrate's WLP Clip Assembly.

\*USACE guidelines can differ among states and regions. Please verify the open area requirement for docks in your state.

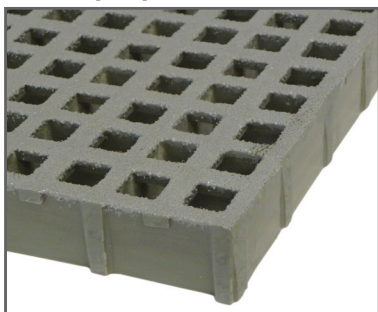
- Meets Army Corps of Engineers Guidelines\*
- Maximum UV Resistance
- Storm Surge Friendly
- Barefoot Friendly
- Depths of 1/2", 1" and 1-1/2" Available
- ADA Compliant
- Corrosion Resistant
- Low Maintenance

Micro-Mesh® decking is formulated for maximum UV resistance and is able to withstand corrosion in saltwater and other harsh environments. The square top mesh of the grating has a maximum opening of 1/2" so it meets the Americans with Disabilities Act (ADA) guidelines, thus making it an excellent choice for public area applications.

Micro-Mesh is available in three depth options (1/2", 1", and 1-1/2") and is light gray in color. This lightweight grating is easy to fabricate and install. The aquagrit surface, the most popular for this decking solution, is also slip resistant and barefoot friendly. Fibergrate's Micro-Mesh decking ensures a safe, long lasting and environmentally friendly solution.

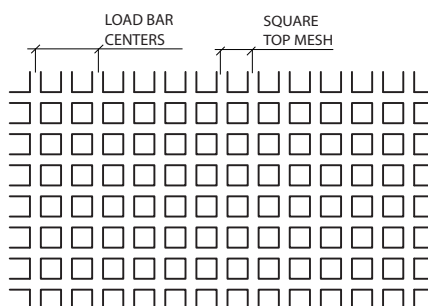
## Details

### Micro-Mesh® 1/2", 1", & 1-1/2" Deep 3/4" Sq Top Mesh

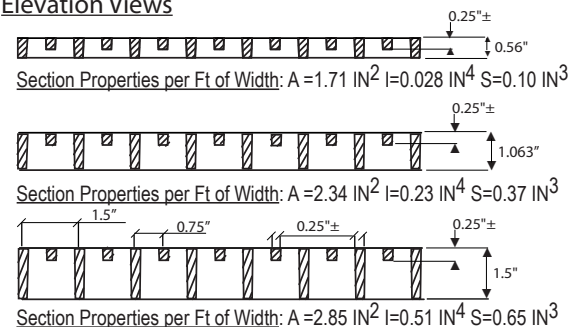


| Depth  | Square Top Mesh | Panel Size         | # of Bars/<br>Ft of Width | Load Bar<br>Width | Open Area | Load Bar<br>Centers | Approx.<br>Weight |
|--------|-----------------|--------------------|---------------------------|-------------------|-----------|---------------------|-------------------|
| 1/2"   | 3/4"±           | 4' 1" x 13' 1-3/4" | 8                         | 1/4"              | 43%       | 1-9/16"             | 2.1 psf           |
| 1"     | 3/4"            | 4' x 12'           | 8                         | 1/4"              | 44.4%     | 1-1/2"              | 2.9 psf           |
| 1-1/2" | 3/4"            | 4' x 12'           | 8                         | 1/4"              | 44.4%     | 1-1/2"              | 4.5 psf           |

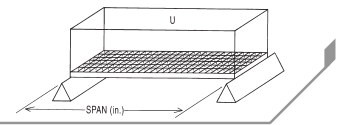
#### Plan View



#### Elevation Views



# Micro-Mesh® Decking



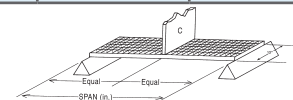
## Uniform Load Table - Deflection in Inches

U Uniform Load - psf  
 ΔU Uniform Load Deflection - in

| Clear Span (in) | Depth         | LOAD (psf) |      |      |      |      |      |      |      |      |      | Maximum Rec. Load (psf) | Ultimate Load (psf) |
|-----------------|---------------|------------|------|------|------|------|------|------|------|------|------|-------------------------|---------------------|
|                 |               | 50         | 65   | 100  | 150  | 200  | 300  | 500  | 1000 | 2000 |      |                         |                     |
| 12              | 1/2" (Note 3) | 0.01       | 0.02 | 0.03 | 0.04 | 0.05 | 0.08 | 0.13 | 0.25 | --   | 600  | 3000                    |                     |
|                 | 1"            | <.01       | <.01 | <.01 | <.01 | 0.01 | 0.02 | 0.03 | 0.06 | 0.12 | 1770 | 8880                    |                     |
|                 | 1-1/2"        | <.01       | <.01 | <.01 | <.01 | <.01 | 0.01 | 0.02 | 0.04 | 0.07 | 2060 | 10420                   |                     |
| 18              | 1/2" (Note 3) | 0.06       | 0.08 | 0.13 | 0.19 | 0.26 | 0.38 | --   | --   | --   | 230  | 1100                    |                     |
|                 | 1"            | 0.01       | 0.02 | 0.03 | 0.04 | 0.06 | 0.08 | 0.14 | 0.28 | --   | 780  | 3940                    |                     |
|                 | 1-1/2"        | <.01       | <.01 | 0.01 | 0.02 | 0.03 | 0.04 | 0.07 | 0.14 | 0.28 | 910  | 6940                    |                     |
| 24              | 1/2" (Note 3) | 0.17       | 0.23 | 0.34 | --   | --   | --   | --   | --   | --   | 110  | 500                     |                     |
|                 | 1"            | 0.04       | 0.05 | 0.08 | 0.12 | 0.16 | 0.24 | 0.41 | --   | --   | 440  | 2220                    |                     |
|                 | 1-1/2"        | 0.02       | 0.03 | 0.04 | 0.06 | 0.06 | 0.12 | 0.21 | 0.42 | --   | 510  | 4000                    |                     |
| 30              | 1/2" (Note 3) | 0.43       | --   | --   | --   | --   | --   | --   | --   | --   | 70   | 300                     |                     |
|                 | 1"            | 0.10       | 0.13 | 0.20 | 0.29 | 0.39 | --   | --   | --   | --   | 280  | 1400                    |                     |
|                 | 1-1/2"        | 0.05       | 0.06 | 0.09 | 0.14 | 0.18 | 0.27 | 0.46 | --   | --   | 330  | 2560                    |                     |
| 36              | 1"            | 0.20       | 0.26 | 0.40 | --   | --   | --   | --   | --   | --   | 190  | 990                     |                     |
|                 | 1-1/2"        | 0.10       | 0.13 | 0.20 | 0.30 | 0.40 | --   | --   | --   | --   | 230  | 1770                    |                     |
| 42              | 1"            | 0.37       | 0.48 | --   | --   | --   | --   | --   | --   | --   | 140  | 720                     |                     |
|                 | 1-1/2"        | 0.17       | 0.22 | 0.34 | --   | --   | --   | --   | --   | --   | 160  | 1300                    |                     |
| 48              | 1-1/2"        | 0.28       | 0.37 | --   | --   | --   | --   | --   | --   | --   | 120  | 1000                    |                     |
| 54              | 1-1/2"        | 0.42       | --   | --   | --   | --   | --   | --   | --   | --   | 100  | 790                     |                     |

## Concentrated Line Load Table - Deflection in Inches

C Concentrated Line Load - pounds per foot of width  
 ΔC Concentrated Line Load Deflection - in



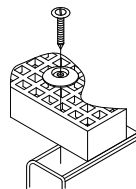
| Clear Span (in) | Depth         | LOAD (LB/FT OF WIDTH) |      |      |      |      |      |      |      | Maximum Rec. Load (lb/ft) | Ultimate Load (lb/ft) |
|-----------------|---------------|-----------------------|------|------|------|------|------|------|------|---------------------------|-----------------------|
|                 |               | 50                    | 100  | 200  | 300  | 500  | 1000 | 2000 |      |                           |                       |
| 12              | 1/2" (Note 3) | 0.03                  | 0.05 | 0.11 | 0.16 | 0.27 | --   | --   | 300  | 1500                      |                       |
|                 | 1"            | <.01                  | <.01 | 0.02 | 0.03 | 0.05 | 0.1  | 0.2  | 880  | 4440                      |                       |
|                 | 1-1/2"        | <.01                  | <.01 | 0.01 | 0.02 | 0.03 | 0.05 | 0.11 | 1030 | 8000                      |                       |
| 18              | 1/2" (Note 3) | 0.09                  | 0.18 | 0.36 | --   | --   | --   | --   | 170  | 880                       |                       |
|                 | 1"            | 0.01                  | 0.03 | 0.06 | 0.09 | 0.15 | 0.29 | --   | 590  | 2960                      |                       |
|                 | 1-1/2"        | 0.01                  | 0.02 | 0.03 | 0.05 | 0.08 | 0.15 | 0.30 | 880  | 5330                      |                       |
| 24              | 1/2" (Note 3) | 0.19                  | 0.37 | --   | --   | --   | --   | --   | 110  | 580                       |                       |
|                 | 1"            | 0.03                  | 0.07 | 0.13 | 0.2  | 0.33 | --   | --   | 440  | 2220                      |                       |
|                 | 1-1/2"        | 0.02                  | 0.03 | 0.07 | 0.10 | 0.17 | 0.33 | --   | 510  | 4000                      |                       |
| 30              | 1/2" (Note 3) | 0.36                  | --   | --   | --   | --   | --   | --   | 90   | 460                       |                       |
|                 | 1"            | 0.06                  | 0.13 | 0.25 | 0.38 | --   | --   | --   | 350  | 1770                      |                       |
|                 | 1-1/2"        | 0.03                  | 0.06 | 0.12 | 0.18 | 0.29 | --   | --   | 410  | 3200                      |                       |
| 36              | 1"            | 0.11                  | 0.21 | 0.42 | --   | --   | --   | --   | 290  | 1480                      |                       |
|                 | 1-1/2"        | 0.05                  | 0.11 | 0.21 | 0.32 | --   | --   | --   | 340  | 2660                      |                       |
| 42              | 1"            | 0.17                  | 0.34 | --   | --   | --   | --   | --   | 250  | 1260                      |                       |
|                 | 1-1/2"        | 0.08                  | 0.16 | 0.32 | 0.47 | --   | --   | --   | 290  | 2280                      |                       |
| 48              | 1-1/2"        | 0.11                  | 0.23 | 0.45 | --   | --   | --   | --   | 250  | 2000                      |                       |
| 54              | 1-1/2"        | 0.15                  | 0.30 | --   | --   | --   | --   | --   | 230  | 1770                      |                       |

### NOTES:

1. All gratings were tested in accordance with the ANSI Standard: FRP Composites Grating Manual for Pultruded and Molded Grating and Stair Treads.
2. Maximum Recommended Load represents a 5:1 factor of safety on Ultimate Capacity.
3. Deflections for 1/2" Deep Micro-Mesh are for multiple span conditions (three supports or more). To determine the deflection for simple spans (two supports), multiply the values in the uniform load table by 1.9 and in the line load table by 1.4. The Maximum Recommended and Ultimate Loads are unchanged. Deflections listed in the tables above for 1" and 1.5" Deep Micro-Mesh are for simple span conditions.

## Clip Assembly

Micro-Mesh grating for decking and docks does require a type WLP clip assembly to secure the grating to a structure. For attachment to concrete, use WLP clips in conjunction with anchor bolts.



Phone: 972-250-1633  
 Fax: 972-250-1530



www.fibergrate.com



info@fibergrate.com

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