Fabcograte FRP Grating

**Grating Selection Process**
1. Select the proper bar spacing and height to meet your load requirements.
2. Select the proper resin to meet your environmental requirements.
3. Select the proper panel size to meet your requirement.
4. Determine if you want grit top or plain top.

**Square Mesh Panel Sizes Available**
- Three Heights 1”, 1.5” and 2”
- 1.5” Weight: 3.75 lb/ft. sq.
- 1” Weight: 2.5 lb/ft. sq.
- Tolerances: ±1/16”
- Bar Spacing: 1.5” X 1.5”
- Most popular pattern
- 70% open area
- Load bearing bars in both directions
- Easy to fabricate
- Can be used without continuous side support
- Labour savings
- High material utilization, low waste
- Uniform appearance

**Rectangular Mesh Panel Sizes**
- 1” HIGH
- Bar Spacing: 1” X 4”
- 1” Weight: 2.50 lb/ft. sq.
- Tolerances: ±1/16”
- Economical
- Original pattern
- 69% open area
- Load bearing bars in both directions
- Easy to install
- Impact resistant
- Quality appearance

### Features:
- Will not rust.
- Corrosion resistant.
- Non-sparking.
- Fire retardant.
- Non-conductive.
- Maintenance free.
- Molded-in color.
- Light weight.
- Easy to install.
- Impact resistant.
- Quality appearance.

<table>
<thead>
<tr>
<th>THICKNESS</th>
<th>BAR SPACING</th>
<th>PANEL SIZE (FT.)</th>
<th>WT (LBS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1”</td>
<td>1.5” x 1.5”</td>
<td>4 X 12</td>
<td>120</td>
</tr>
<tr>
<td>1”</td>
<td>1.5” x 1.5”</td>
<td>4 X 10</td>
<td>100</td>
</tr>
<tr>
<td>1”</td>
<td>1.5” x 1.5”</td>
<td>4 X 8</td>
<td>80</td>
</tr>
<tr>
<td>1”</td>
<td>1.5” x 1.5”</td>
<td>3 X 12</td>
<td>90</td>
</tr>
<tr>
<td>1”</td>
<td>1.5” x 1.5”</td>
<td>3 X 10</td>
<td>75</td>
</tr>
<tr>
<td>1”</td>
<td>1.5” x 1.5”</td>
<td>5 X 10</td>
<td>125</td>
</tr>
<tr>
<td>1.5”</td>
<td>1.5” x 1.5”</td>
<td>4 X 12</td>
<td>180</td>
</tr>
<tr>
<td>1.5”</td>
<td>1.5” x 1.5”</td>
<td>4 X 10</td>
<td>150</td>
</tr>
<tr>
<td>1.5”</td>
<td>1.5” x 1.5”</td>
<td>4 X 8</td>
<td>120</td>
</tr>
<tr>
<td>1.5”</td>
<td>1.5” x 1.5”</td>
<td>3 X 12</td>
<td>135</td>
</tr>
<tr>
<td>1.5”</td>
<td>1.5” x 1.5”</td>
<td>3 X 10</td>
<td>113</td>
</tr>
<tr>
<td>1.5”</td>
<td>1.5” x 1.5”</td>
<td>5 X 10</td>
<td>187</td>
</tr>
<tr>
<td>1”</td>
<td>1” x 4”</td>
<td>3 X 10</td>
<td>75</td>
</tr>
<tr>
<td>1”</td>
<td>1” x 4”</td>
<td>44” X 8</td>
<td>75</td>
</tr>
<tr>
<td>1”</td>
<td>1” x 4”</td>
<td>4 X 8</td>
<td>80</td>
</tr>
<tr>
<td>1”</td>
<td>1” x 4”</td>
<td>4 X 12</td>
<td>120</td>
</tr>
<tr>
<td>2”</td>
<td>2” x 2”</td>
<td>4 X 12</td>
<td>192</td>
</tr>
</tbody>
</table>
CF CHEMICAL PROOF
(standard colour is dark gray) is a vinyl ester system specifically engineered to provide premium service in highly corrosive environments. It utilizes an advanced resin system which delivers outstanding resistance to a wide range of harsh corrosive environments ranging from acidic to caustic, plus a high degree of solvent resistance. It has a Class I flame spread rating of 25 or less according to the ASTM E-84 Tunnel Test Method.

CR+CHEMICAL PROOF PLUS
(standard colour is black). This is our only E.F.R.P™ Grating to offer a flame spread rating of 10 or less on ASTM E-84 Tunnel Test. It has excellent acid and caustic resistance.

IF INDUSTRIAL GRADE
(standard colour is light gray). This is a premium corrosion resistant isophthalic resin system selected for outstanding acid resistance. It has moderate resistance to caustic and solvent environments. It has a Class I ASTM E-84 Tunnel Test flame spread rating of 25 or less. It is more economical than types CF and CR+.

FF FOOD GRADE
(standard colour is safety yellow). Agriculture Canada approved (all ingredients have been USDA approved) to meet corrosive conditions commonly found in meat production, food processing, bottling and brewing applications. Made with isophthalic polyester. Flame spread rating is 30 or less.

AF ARCHITECTURAL GRADE FIRE RETARDENT
(standard colour is light gray). This is a resin system designed for mildly corrosive environments. Best suited to replace metal gratings that require maintenance to maintain an aesthetically pleasing appearance. It has a Class 1, ASTM E-84 Tunnel Test flame spread rating of 25 or less for indoor use. It is more economical than type IF.

AN ARCHITECTURAL GRADE
(standard colour is green). Similar resin system as type AF but is not fire retardant or flame spread rated. More economical than AF.

<table>
<thead>
<tr>
<th>RESIN CODE</th>
<th>DESCRIPTION</th>
<th>BASE RESIN</th>
<th>CORROSION RESISTANCE</th>
<th>FLAME SPREAD RATING</th>
<th>COLOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF</td>
<td>CHEMICAL PROOF FIRE RETARDANT</td>
<td>VINYL ESTER</td>
<td>EXCELLENT</td>
<td>CLASS 1: 25 OR LESS</td>
<td>DARK GRAY or ORANGE</td>
</tr>
<tr>
<td>CR+</td>
<td>CHEMICAL PROOF FIRE RETARDANT PLUS</td>
<td>VINYL ESTER</td>
<td>EXCELLENT</td>
<td>CLASS 1: 10 OR LESS</td>
<td>BLACK</td>
</tr>
<tr>
<td>IF</td>
<td>INDUSTRIAL GRADE FIRE RETARDANT</td>
<td>ISOPHTHALIC</td>
<td>VERY GOOD</td>
<td>CLASS 1: 25 OR LESS</td>
<td>GREEN or GRAY</td>
</tr>
<tr>
<td>FF</td>
<td>FOOD GRADE FIRE RETARDANT</td>
<td>ISOPHTHALIC</td>
<td>VERY GOOD</td>
<td>CLASS 2: 30 OR LESS</td>
<td>LIGHT GRAY</td>
</tr>
<tr>
<td>AF</td>
<td>ARCHITECTURAL GRADE</td>
<td>ORTHOPHTHALIC</td>
<td>GOOD</td>
<td>CLASS 1: 25 OR LESS</td>
<td>GREEN</td>
</tr>
<tr>
<td>AN</td>
<td>ARCHITECTURAL GRADE NON FIRE RETARDANT</td>
<td>ORTHOPHTHALIC</td>
<td>GOOD</td>
<td>NOT RATED</td>
<td>YELLOW or GREEN</td>
</tr>
</tbody>
</table>

Note: All grating types available with or without grit top for slip resistance.
**Deflection to Span Ratios**
- For a resilient, non-fatiguing, comfortable feel use the STANDARD deflection to span ratio of 1:120.
- For an elevated installation, where a solid feeling is desired, use a deflection to span ratio of 1:180 (NBC-85). A deflection to span ratio greater than 1:100 (1%) is not recommended. Do not exceed .5” (13mm).

**Panel Installation**
- Panels are designed to be supported on all sides.
- Use end clips if panel ends cannot be supported.
- Use hold down clips to prevent panel drift.

**Panel Selection**
- Determine the type of loading: concentrated or uniform.
- Estimate the load and determine the span.
- Decide what maximum deflection is appropriate: solid, standard or 1%.
- Enter the appropriate 1” (25mm) table. If the deflection is less than the maximum selected, choose the 1” thickness. It is more economical than 1.5” thick panels.
- If the deflection or span is too great for 1” thick panels, select 1.5” thick FRP Grating and design your support system for the appropriate span.
- Select the resin system.

### Load Deflection Tables

#### Concentrated Load: Full Panel

<table>
<thead>
<tr>
<th>SPAN (in)</th>
<th>LOAD (Pounds)</th>
<th>2” HEIGHT — 2” x 2” MESH</th>
<th>MAXIMUM LOADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>0.00</td>
<td>0.00</td>
<td>2060</td>
</tr>
<tr>
<td>18</td>
<td>0.03</td>
<td>0.03</td>
<td>1660</td>
</tr>
<tr>
<td>24</td>
<td>0.05</td>
<td>0.05</td>
<td>1260</td>
</tr>
<tr>
<td>36</td>
<td>0.07</td>
<td>0.07</td>
<td>860</td>
</tr>
<tr>
<td>48</td>
<td>0.09</td>
<td>0.09</td>
<td>460</td>
</tr>
</tbody>
</table>

#### Uniform Load: Full Panel

<table>
<thead>
<tr>
<th>SPAN (in)</th>
<th>LOAD (lb/ft²)</th>
<th>2” HEIGHT — 2” x 2” MESH</th>
<th>MAXIMUM LOADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>0.00</td>
<td>0.00</td>
<td>506</td>
</tr>
<tr>
<td>18</td>
<td>0.01</td>
<td>0.01</td>
<td>366</td>
</tr>
<tr>
<td>24</td>
<td>0.01</td>
<td>0.01</td>
<td>226</td>
</tr>
<tr>
<td>36</td>
<td>0.01</td>
<td>0.01</td>
<td>136</td>
</tr>
</tbody>
</table>

#### Panel Installation
- Panels are designed to be supported on all sides.
- Use end clips if panel ends cannot be supported.
- Use hold down clips to prevent panel drift.

### Load Deflection Tables

#### 2” HEIGHT — 2” x 2” MESH

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<tr>
<th>PANEL</th>
<th>STANDARD</th>
<th>DEFLECTION</th>
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<tbody>
<tr>
<td>1”</td>
<td>1.5”</td>
<td>1:180</td>
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### Load Deflection Tables

#### Panel Selection
- Determine the type of loading: concentrated or uniform.
- Estimate the load and determine the span.
- Decide what maximum deflection is appropriate: solid, standard or 1%.
- Enter the appropriate 1” (25mm) table. If the deflection is less than the maximum selected, choose the 1” thickness. It is more economical than 1.5” thick panels.
- If the deflection or span is too great for 1” thick panels, select 1.5” thick FRP Grating and design your support system for the appropriate span.
- Select the resin system.

### Load Deflection Tables

#### 1” HEIGHT — 1” x 4” MESH

<table>
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<tr>
<th>PANEL</th>
<th>STANDARD</th>
<th>DEFLECTION</th>
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</thead>
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#### 1” HEIGHT — 1” x 4” MESH

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<th>STANDARD</th>
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</tr>
</thead>
<tbody>
<tr>
<td>1”</td>
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<td>1:180</td>
</tr>
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</table>
PULTRUDED GRATING

Pultruded Grating

DURADEK® Standard Pultruded Grating
DURADEK® is a standard pultruded grating product. It is available with individual bearing bars in either 1” or 1-1/2” “I” shapes or a 2” “T” shape. DURADEK® is a flame retardant product utilizing a polyester or vinyl ester resin. The bearing bars use both longitudinal (glass roving) and multidirectional (glass mat) reinforcements as well as a synthetic surfacing veil to provide unequaled corrosion resistance.

The bearing bars are assembled into 12 panel sizes: 3, 4, and 5 foot widths in each of 8, 10, 12 and 20 foot lengths. Standard panels come with cross-rod spacings of 6” or optional 12” on center. Grids can be ordered with or without an anti-skid grit surface. A variety of grit material and textures can be ordered.

DURAGRID® Custom Grating
DURAGRID® custom grid and grating systems are designed to accommodate specific applications that cannot effectively be met by a standard fiberglass grating. DURAGRID® offers the customer options such as selection of bar spacing (which creates varying open space in the grating or grid), bar shape, cross-rod placement, custom fabrication, custom resin or color.

DURAGRID® Heavy Duty Grating
DURAGRID® Heavy Duty Grating is a pultruded bar type grating that can be designed and used like traditional metal grates. The solid individual bearing bars are designed to take heavy wheel traffic such as fork lifts, tow motors and truck traffic. Heavy duty grating is constructed of the same type composite used in the other DURAGRID® products.

DURAGRID® Phenolic Grating
DURAGRID® Phenolic grating is a dramatic innovation for markets where fire safety is a major concern; it offers superior resistance to flame and high temperature with low emissions of smoke and toxic fumes. The nonflammable nature of phenolics enable phenolic grating to withstand higher temperatures than polyester or vinyl ester for extended periods of time without major structural damage. Combined with low thermal conductivity, this provides fire protection not available with alternate materials. DURAGRID® Phenolic grating was the first composite grating to receive U.S. Coast Guard approval. It is accepted for use in locations and applications as allowed in the U.S.C.G. Policy File Memorandum 2-98 for fire retardant grating meeting structural fire integrity Level 2(L2).

Please contact customer service for more information on material properties and technical information.
Grating Accessories

**Fiberglass Covered Grating**
All Fiberglass Grating is available with an integral cover plate to prevent fumes in the work area or where high stiffness over drainage trenches is required.

**Fiberglass Floor Plate**
Available to cover all panel sizes. Easy to clean both top and bottom sides. Can be used as a splash guard. Available in thickness from 1/16” (1.5mm) to 1” (25mm). Grit top surface is standard for floor plate applications.

**Fiberglass Stair Treads**
Fiberglass stair treads come complete with contrasting colored antislip nosing. Available in standard lengths of 24”, 30”, 36”, or 42”. Available in widths of 9”, 10 1/2”, or 12”.

**Fiberglass Concrete Curb Angle**
Pultruded fiberglass Curb Angle provides a strong, firm base for bearing bars. Standard Curb Angle is produced using a gray, fire retardant vinyl ester resin system and is available in three sizes.

**Fiberglass Elevated Floor Systems**
Fixed and adjustable Fiberglass Columns are available to provide elevated dry floor. Strongwell’s pultruded fiberglass Curb Angle provides a strong, firm base for bearing bars. Standard Curb Angle is produced using a gray, fire retardant vinyl ester resin system and is available in three sizes. Floors can be designed to support up to 2,000 pounds per square foot.

**Grating Clips**
Prevent panel drift - bold, nut and washer included. Use 2 or 3 for each side of each full size panel; 4 for each Stair Thread. 18-8 stainless steel. The following Types are available:

**Type M Clips**
Restrains movement in all directions. Can use self-drilling screws when attaching to metal supports.

**Type G-G Clips**
Install from top of grating. No hole to drill. Galvanized available.

**Type J Clips**
For moderate loads.

**Type C**
For joining two unsupported ends.