

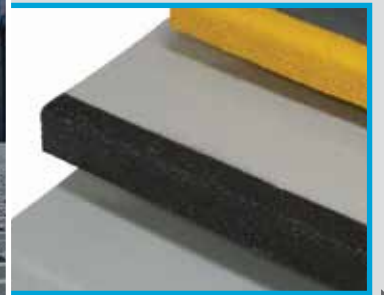
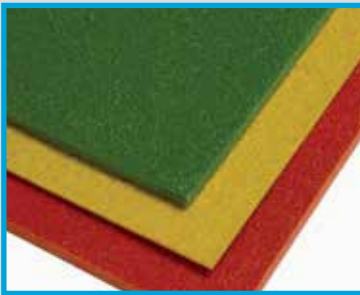
# GRP Moulded Products

SI Units

HIGH PERFORMANCE COMPOSITE SOLUTIONS



*Building the World to Last®*



# GRP Moulded Products

## Introduction

Combining unmatched corrosion resistance with strength, long life and safety, Fibergrate Composite Structures Inc. sets the standard for glass reinforced plastic (GRP) Moulded products. With more than ten custom resins, Fibergrate products are proven to deliver years of reliable service, even in the most demanding corrosive conditions — conditions which cause conventional metallic and wood products to deteriorate rapidly.



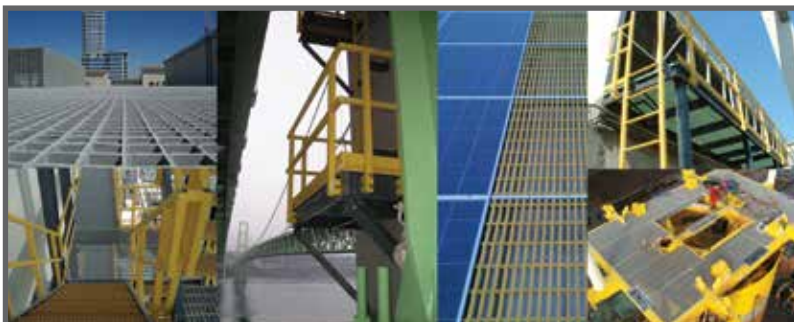
Fibergrate products are lightweight and easy to fabricate. Savings on labour and equipment often make the total installed cost of Fibergrate products comparable to that of steel. Combining these installation savings with low maintenance, long life and worker safety, Fibergrate products offer a life cycle cost that is significantly lower than that of metallic products.

Fibergrate's Moulded grating line includes Fibergrate® Moulded grating for most applications, Fibergrate® Moulded high load capacity grating for H-20 and forklift traffic, Micro-Mesh® for access flooring and for docks and marinas, Airmesh® screening, and Multigrid® grating. For applications requiring a solid walkway, Fibergrate carries Fiberplate® structural floor panels and Fibergrate® covered grating. Stair solutions include Fibertred® stair tread panels for industrial and commercial use, covered stair treads for architectural applications, and stair tread covers for existing stairways. Ergonomic work platform solutions include Safe-T-Stand® platforms, which are available in varying heights, and raised ergonomic workmats. Fibergrate now offers FGI-AM, that is, Moulded grating with Microban. Microban is infused in the resin to prohibit the growth of odour and stain-causing bacteria for the food and beverage industry.



Fibergrate's complete line of Moulded products and turnkey services offers a variety of solutions for most applications.

## Fibergrate Markets



- Architectural
- Bridge & Highway
- Chemical
- Commercial
- Food & Beverage
- Manufacturing
- Metals & Mining
- Microelectronics
- Oil & Gas
- Pharmaceutical
- Power
- Pulp & Paper
- Recreation
- Telecommunications
- Transportation
- Water & Wastewater

# Fibergrate® Benefits

## Why use GRP?



**Corrosion-resistant:** Fibergrate® Moulded GRP products are known for their ability to provide corrosion resistance in the harshest environments and chemical exposures.



**Slip-resistant:** The meniscus and integrally applied grit surfaces of Fibergrate Moulded products have unmatched slip resistance for improved worker safety.



**Low Maintenance:** The corrosion-resistant properties of GRP grating and other products reduce or eliminate the need for sandblasting, scraping and painting. Products are also easily cleaned with a high pressure washer.



**Fire Retardant:** Most Fibergrate products are engineered to have a flame spread rating of 25 or less, as tested in accordance with ASTM E-84, and meet the self-extinguishing requirements of ASTM D-635.



**High Strength to Weight Ratio:** Less than one-half the weight of steel grating, allowing easy removal for access below floor level and installation with no heavy equipment and less manpower.



**Electrically & Thermally Non Conductive:** GRP is electrically non conductive for safety and has low thermal conductivity which results in a more comfortable product when physical contact occurs.



**Impact Resistant:** Fibergrate moulded products show superior impact resistance when compared to steel gratings.



**Low Install Cost:** Due to ease of fabrication and lightweight, GRP moulded grating eliminates the need for heavy lifting equipment.



**Long Service Life:** GRP products provide outstanding durability and corrosion resistance in demanding applications, therefore providing improved product life over traditional materials.



### NSF® Standard 61-Certified:

NSF Standard 61-Certified moulded grating is available in all Fibergrate® moulded grating mesh patterns and thicknesses, except Ecograte® and 102mm x 305mm Micro-Mesh® panels.

These moulded gratings complement the complete line of NSF Standard 61-Certified Dynaform® GRP structural shapes, Dynarail® GRP guardrail, handrail and ladder systems, and Safe-T-Span® pultruded gratings assembled from NSF Standard 61-Certified GRP components.



### Heavy Metal Safe:

The EPA, OSHA and other regulatory agencies created to






protect our lives and our natural resources have increased legislation to control heavy metals such as lead, chrome, cadmium and other metals in all products where exposure is a health threat. Fibergrate Composite Structures Inc. supports this strengthened legislation and has for more than 20 years, voluntarily tested for heavy metals in our products and minimized or eliminated heavy metals from our products.

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# Moulded Grating Selection & Details

## Fibergrate® Moulded Grating

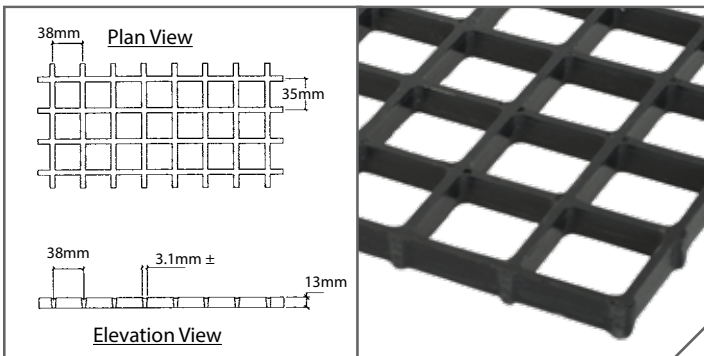
Brand	Depth (mm)	Mesh (mm)	Standard Panel Sizes (mm)	Wt. Per m <sup>2</sup>	Open Area
Airmesh®	13	38 x 38 square	1219 x 2438 ( <i>non-load carrying product</i> )	3.9 kg	87%
Multigrid®	13	51 x 51 square	1219 x 3658, 1219 x 4572 ( <i>must be fully supported</i> )	4.9 kg	82%
Micro-Mesh® 	13	Top 19±	1245 x 4007	10.3 kg	43%
Fibergrate®	16	25 x 102 rectangular	3658 x 1219	9.8 kg	58%
Fibergrate	19	25 x 102 rectangular	3048 x 914, 2438 x 1219	12.2 kg	69%
Fibergrate	19	38 x 38 square	914 x 3048, 1219 x 2438, 1219 x 3657	9.8 kg	70%
Micro-Mesh®	25	Top 19 sq, bottom 38 sq	1219 x 3657	14.2 kg	44.4%
Ecograte®62 	25	19 x 102 rectangular	1219 x 3657	14.6 kg	62%
Fibergrate	25	25 x 102 rectangular	3048 x 914, 2438 x 1219	12.2 kg	69%
Fibergrate	25	38 x 38 square	914 x 3048, 1219 x 2438, 1219 x 3657	12.2 kg	70%
Fibergrate	25	51 x 51 square	1219 x 3657	8.3 kg	76%
Fibergrate	32	38 x 38 square	914 x 3048, 1219 x 2438, 4' x 3657, 1524 x 3048	15.6 kg	70%
Fibergrate	38	38 x 38 square	914 x 3048, 1219 x 2438, 1219 x 3657, 1524 x 3048	18.6 kg	70%
High Load 	38	25 x 51 rectangular	1828 x 1219, 1219 x 2438	30.3 kg	48%
Micro-Mesh® 	38	Top 19 sq, Btm 38 sq	609 x 609, 1219 x 3657	22.0 kg	44.4%
Fibergrate	51	51 x 51 square	1219 x 3657	19.5 kg	72%
High Load 	51	25 x 51 rectangular	1828 x 1219, 1219 x 2438	41.0 kg	48%

See page 8 for surface selection.

## Grating Details

### Airmesh® 13mm Deep x 38mm Square Mesh

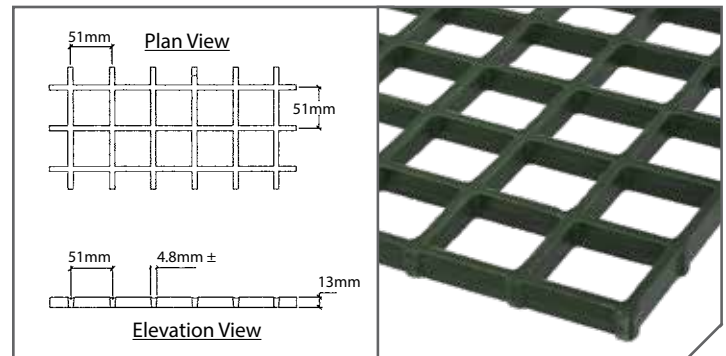
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
26	3.2mm	87%	38mm	3.9 kg/m <sup>2</sup>



Designed for screening applications only

### Multigrid® 13mm Deep x 51mm Square Mesh

# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
20	4.8mm	82%	51mm	4.7 kg/m <sup>2</sup>



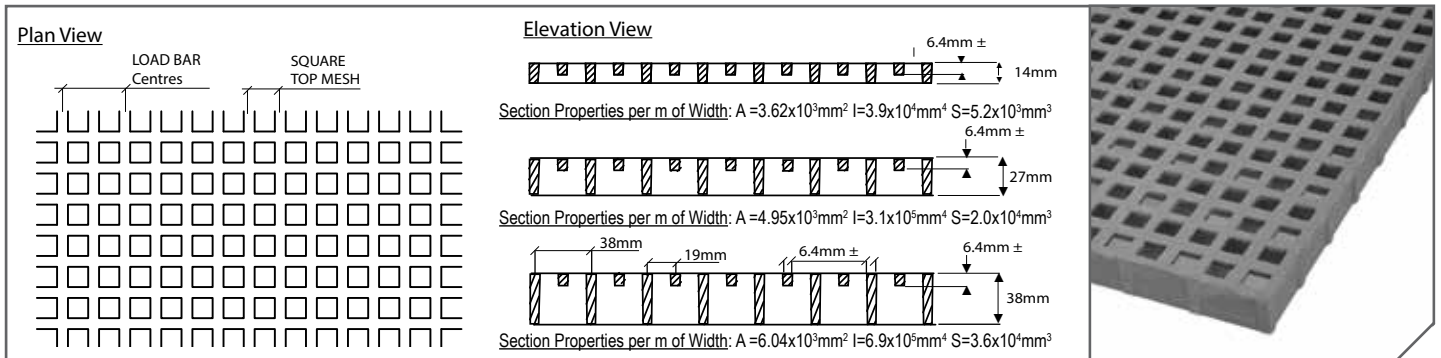
Must be fully supported in walking surface applications

# Moulded Grating Details

## Micro-Mesh® 13mm, 25mm & 38mm Deep x 19mm Sq Top Mesh



Depth	Square Top Mesh	Panel Size	# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
13mm	19mm ±	1245mm x 4007mm	26	6.4mm	43.0%	40mm	10.3 kg/m <sup>2</sup>
25mm	19mm	1219mm x 3658mm	26	6.4mm	44.4%	38mm	14.2 kg/m <sup>2</sup>
38mm	19mm	1219mm x 3658mm	26	6.4mm	44.4%	38mm	22 kg/m <sup>2</sup>

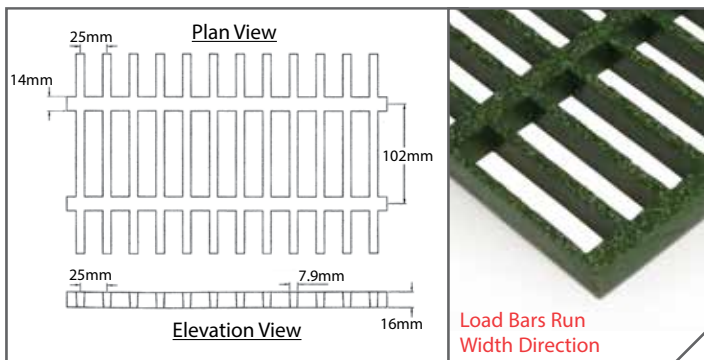


## Ecograte®62



### 16mm Deep x 25mm x 102mm Rectangular Mesh\*

# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
39	7.9mm	58%	25mm	9.7 kg/m <sup>2</sup>

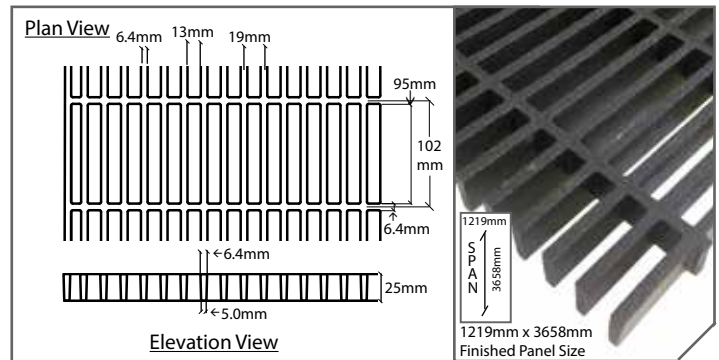


Section Properties per m of Width: A = 4.47x10<sup>3</sup>mm<sup>2</sup> I = 9.56x10<sup>6</sup>mm<sup>4</sup> S = 1.18x10<sup>4</sup>mm<sup>3</sup>

\*Not available with meniscus top surface (only grit)

### 25mm Deep x 19mm x 102mm Rectangular Mesh

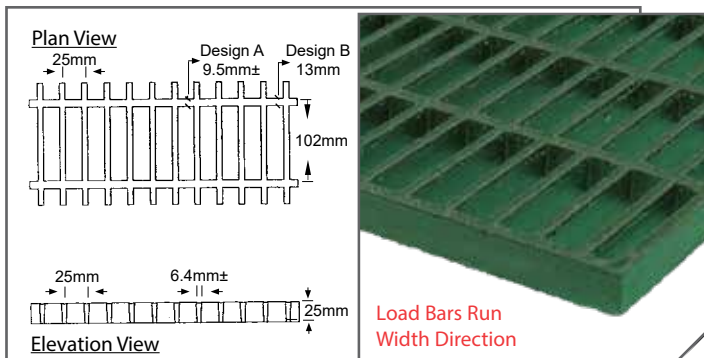
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
16	6.4mm	62%	19mm	14.6 kg/m <sup>2</sup>



Section Properties per m of Width: A = 7.58x10<sup>3</sup>mm<sup>2</sup> I = 4.07x10<sup>5</sup>mm<sup>4</sup> S = 308x10<sup>4</sup>mm<sup>3</sup>

### 25mm Deep x 25mm x 102mm Rectangular Mesh\*

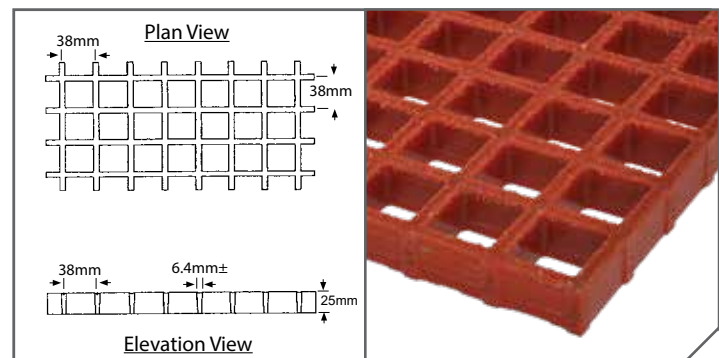
Panel Sizes (mm)	# of Bars/ m of Width	Load Bar Width	Tie Bar Width	Open Area	Load Bar Centres	Approx. Weight
Design A 3048 x 914 Design B 2438 x 1219	39	9.5mm	6.4mm	69%	25mm	12.2 kg/m <sup>2</sup>



Section Properties per m of Width: A = 5.44x10<sup>3</sup>mm<sup>2</sup> I = 3.00x10<sup>6</sup>mm<sup>4</sup> S = 2.31x10<sup>4</sup>mm<sup>3</sup>

### 25mm Deep x 38mm Square Mesh

# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
26	6.4mm	70%	38mm	12.2 kg/m <sup>2</sup>

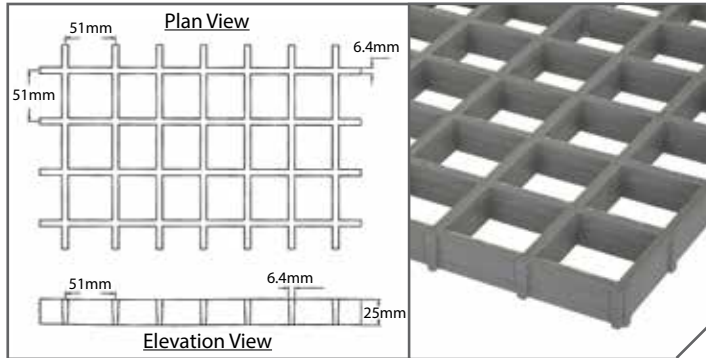


Section Properties per m of Width: A = 3.62x10<sup>3</sup>mm<sup>2</sup> I = 1.91x10<sup>5</sup>mm<sup>4</sup> S = 1.56x10<sup>4</sup>mm<sup>3</sup>

# Moulded Grating Details

## 25mm Deep x 51mm Square Mesh

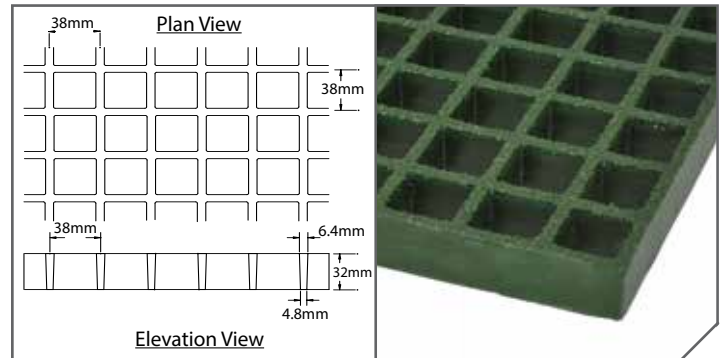
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
20	6.4mm	76%	51mm	8.3 kg/m <sup>2</sup>



Section Properties per m of Width: A = 2.69x10<sup>3</sup>mm<sup>2</sup> I = 1.50x10<sup>5</sup>mm<sup>4</sup> S = 1.13x10<sup>4</sup>mm<sup>3</sup>

## 32mm Deep x 38mm Square Mesh\*

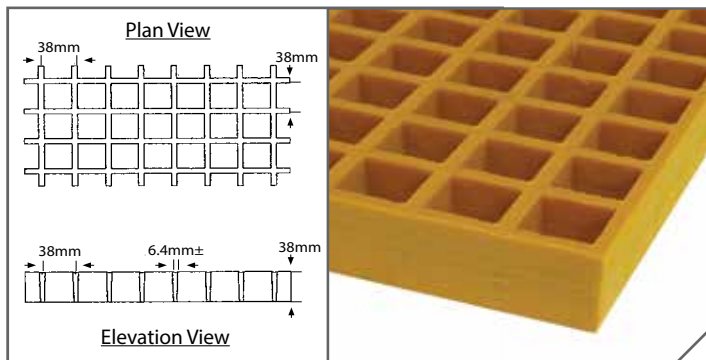
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
26	6.4mm	70%	38mm	15.6 kg/m <sup>2</sup>



Section Properties per m of Width: A = 4.57x10<sup>3</sup>mm<sup>2</sup> I = 4.37x10<sup>5</sup>mm<sup>4</sup> S = 2.58x10<sup>4</sup>mm<sup>3</sup>  
\*Not available with meniscus top surface (only grit)

## 38mm Deep x 38mm Square Mesh

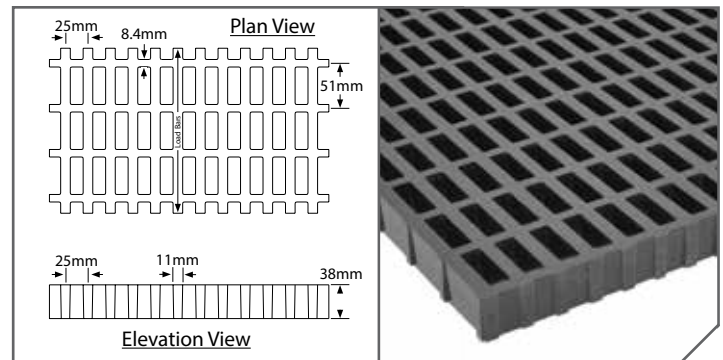
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
26	6.4mm	70%	38mm	18.6 kg/m <sup>2</sup>



Section Properties per m of Width: A = 6.03x10<sup>3</sup>mm<sup>2</sup> I = 6.96x10<sup>5</sup>mm<sup>4</sup> S = 3.49x10<sup>4</sup>mm<sup>3</sup>

## HLC 38mm Deep x 25mm x 51mm Rectangular Mesh

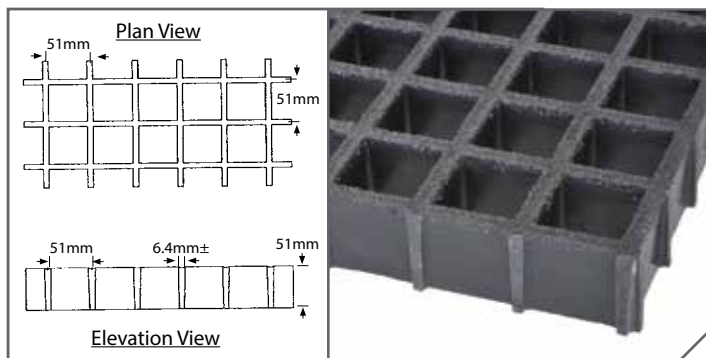
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
39	11mm	48%	25mm	30.3 kg/m <sup>2</sup>



Section Properties per m of Width: A = 1.58x10<sup>4</sup>mm<sup>2</sup> I = 1.90x10<sup>6</sup>mm<sup>4</sup> S = 9.68x10<sup>4</sup>mm<sup>3</sup>

## 51mm Deep x 51mm Square Mesh

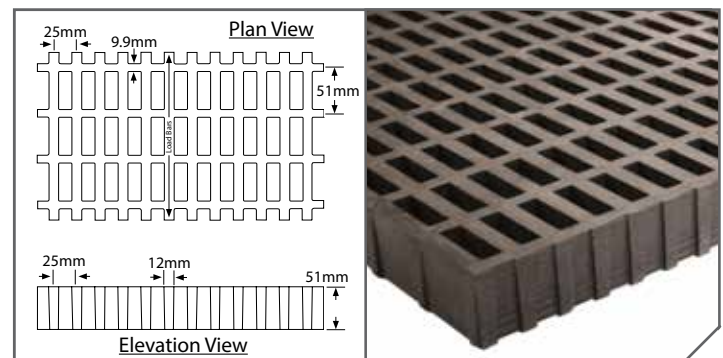
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
20	6.4mm	72%	51mm	19.5 kg/m <sup>2</sup>



Section Properties per m of Width: A = 6.10x10<sup>3</sup>mm<sup>2</sup> I = 1.31x10<sup>6</sup>in<sup>4</sup> S = 5.05x10<sup>5</sup>mm<sup>3</sup>

## HLC 51mm Deep x 25mm x 51mm Rectangular Mesh

# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
39	12mm	48%	25mm	41 kg/m <sup>2</sup>



Section Properties per m of Width: A = 2.17x10<sup>4</sup>mm<sup>2</sup> I = 4.64x10<sup>6</sup>mm<sup>4</sup> S = 1.76x10<sup>5</sup>mm<sup>3</sup>

# Moulded Grating Resins

Corrosion in the workplace negatively impacts your bottom line. Each year, industrial plant executives eliminate expensive corrosion-related maintenance problems by switching to Fibergrate® moulded grating. Various applications present different requirements, so Fibergrate offers numerous standard resin systems to address multiple needs.

## Fibergrate® Standard Resins

**Vi-Corr®:** A superior vinyl ester resin developed for reliable performance in the toughest environments. It offers outstanding resistance to a wide range of highly corrosive situations, from caustic to acidic. In fact, no other resin system can match the performance of Vi-Corr in highly acidic environments. **Vi-Corr has replaced VE-25.** Colour: orange or dark grey. Flame spread: ASTM E84 rating of 25 or less. Certifications: DNV GL Type Approval No. TAF000003C; ABS Type Approval No. 01-HS34733-X; meets the USCG requirements for general fire rating\*.

**FGI-AM®:** This NEWLY improved food-grade isophthalic polyester resin system is infused with Microban® antimicrobial product protection which inhibits the growth of odour and stain-causing bacteria for the lifespan of the product. Fibergrate's FGI-AM resin offers the necessary corrosion resistance to meet the requirements of the food and beverage industry. This product is intended only for non-public health uses. Colour: light grey or green. Flame Spread: ASTM E84 rating of 25 or less. Certifications: USDA Approvable.



**Corvex®:** This newly improved isophthalic polyester resin system outperforms a number of competitive GRP and metal products, and meets the requirements for corrosion-resistance found in industrial, chemical processing and water/wastewater applications. **This upgraded formulation has replaced IFR, CP-84 and FS-25 resins.** Colour: yellow, dark grey, or dark green. Flame Spread: ASTM E84 rating of 25 or less. Certifications: meets the USCG requirements for general fire rating\*.

**XFR:** This extra Fire Retardant vinyl ester resin is recommended for use where the fire potential is high. Colour: dark grey. Flame Spread: ASTM E84 rating of 10 or less, a level exceeded by no other resin system. Certifications: meets the USCG requirements for general fire rating\*.

**ELS:** This Extremely Low Smoke resin is an acrylic-modified polyester system that is ideal for tunnel, offshore, mass transit and other confined space applications. ELS exhibits low ignitability, low smoke generation and extremely low smoke toxicity. Colour: dark grey. Flame Spread: ASTM E84: flame spread index of 25 or less, a smoke developed index of 100 or less and Fuel Contribution of 0. Certifications: DNV GL Type Approval No. TAF000003C; meets the USCG requirements for general fire rating\*.

**Super Vi-Corr®:** This family of resin systems consists of more than 30 custom formulas engineered to provide corrosion control solutions in applications that are too severe for conventional GRP and other building materials. Each Super Vi-Corr resin was engineered for the best possible performance in specific chemical and/or elevated temperature environments. These systems exist for aggressive chemical service in reagents like solvents, acidic oxidizers, chlorine dioxide, sodium hypochlorite and liquid desiccants. Certain formulas are also suited for elevated temperature applications up to 400° F. Super Vi-Corr gratings are typically used for packing hold-downs and support in environmental and process scrubber applications. Colour: natural - tan to beige. Flame Spread: non fire retardant, unless specified.

*\*For specific requirements and questions, please contact technical services.*

## Specialty

Fibergrate also offers specialty resins custom designed to meet your specific needs. These special formulations are developed to address unique and demanding services and applications, as well as niche market needs (Super Vi-Corr family of resins).

We can engineer resin systems to address temperature, flame, smoke and toxicity requirements. Our HSUV resin system was developed to address the intense UV effects found in offshore applications. Fibergrate's custom formulations with low smoke/toxicity properties were engineered with the United States Navy for below-deck marine service.

**Architectural Formulations:** Fibergrate's standard formulations are designed for industrial and corrosive applications. Special formulations and colours are required to meet the unique demands of architectural, fountain and pool projects. Please contact Fibergrate for additional information.

# Moulded Grating Surfaces and Options

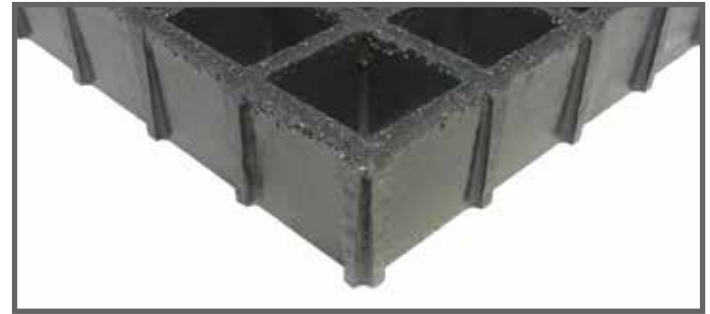
## Slip-Resistant Surfaces

Slips and falls are the second leading cause of industrial accidents. According to the National Safety Council, each injury related lost work day can cost USD50,000 to USD100,000. That is why Fibergrate developed two slip-resistant surfaces for flooring and stair solutions. These surfaces include meniscus and integrally applied grit tops in the Fibergrate resins.

## Available Surfaces for Moulded Grating



**Meniscus Top:** The concave surface of Fibergrate® meniscus top grating provides superior slip-resistant footing in most environments including wet or oily conditions and is the standard surface for most Fibergrate moulded gratings.



**Integrally Applied Grit Top:** The optional grip top of Fibergrate® grating has a quartz grit which is integrally applied, cured and sealed onto the surface providing excellent slip-resistant footing.

**Please note** - The following moulded grating panels are **only available with the grit top surface** (meniscus top not an option):  
16mm deep, 25mm x 102mm rect. mesh, 3658mm x 1219mm panel; 32mm deep, 38mm square mesh

## Specialty Moulded Products

**GRP Conductive Surface:** Fibergrate® Conductive Surface Grating properties are based on the requirements found in [NFPA 77, Recommended Practice on Static Electricity, 2000 Edition](#). The specification values below are minimum values based upon the guidance of NFPA 77, and apply only when the product is clean and grounded. Fibergrate recommends a minimum of 4 grounding attachments at the corners of a section of grating.

- Average Surface Resistivity –  $8.2 \times 10^3$  ohms to  $3.3 \times 10^6$  ohms per lineal metre
- Average Resistance to Ground –  $<10^8$  ohms

**Fibergrate HF Moulded Grating:** Fibergrate has combined a premium-grade vinyl ester resin and exotic reinforcements to manufacture the only Moulded grating system suitable for service in harsh hydrofluoric acid applications. HF Moulded Grating, a non fire retardant system, can see service in applications that would cause premature failure in most traditional moulded grating systems.

**NSF® Standard 61-Certified Moulded Gratings:** Fibergrate now manufactures NSF Standard 61-Certified grating. NSF formulated moulded grating is available by special order in dark grey and light grey colours. moulded grating is also available in all of the moulded grating mesh patterns and grating thicknesses, except Ecograte® and 1219mm x 3658mm Micro-Mesh® panels. Our NSF Standard 61-Certified structural shapes, handrails, ladders and pultruded GRP components can be combined to create valuable, long-lasting stairways, walkways and platforms.

## Custom Moulded Products

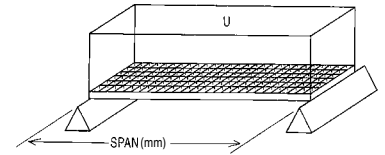
Fibergrate has the capability to offer moulded grating configurations designed/manufactured to meet your unique application requirements. Fibergrate's custom services include special moulded grating configurations as well as custom hand-lay-up (HLU) products for industrial and architectural applications designed to meet your specific performance requirements.



# Load Tables - Fibergrate® Moulded Gratings

Uniform load tables for alternate thickness Fibergrate grating (19x25x102, 19x38x38, 32x38x38) and Micro-Mesh®13mm grating can be found on our website - [fibergrate.uk](http://fibergrate.uk) - under *Products, Moulded Grating, Fibergrate Moulded Gratings* and click on *Additional Load Tables*.

**\*Also represents load data for Micro-Mesh 38mm deep x 19mm square top mesh grating (1219 x 3658) panel.**



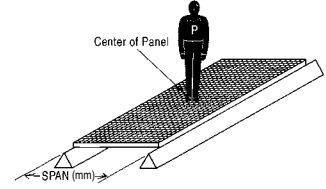
MOULDED GRATING UNIFORM LOAD TABLES - DEFLECTION IN MILLIMETRES												MAX RECOM. LOAD (kN/m <sup>2</sup> )	ULTIMATE CAPACITY (kN/m <sup>2</sup> )
CLEAR SPAN (mm)	STYLE		LOAD (kN/m <sup>2</sup> )										
	DEPTH (mm)	MESH (mm x mm)	3.0	5.0	7.5	10.0	20.0	30.0	50.0	75.0	100.0		
400	16	25 x 102	1.0	1.7	2.6	3.5	7.1	10.6	--	--	--	43.8	219.7
	25	19 x 19	< 0.3	0.4	0.7	0.9	1.9	2.9	4.8	7.2	9.7	50.4	254.3
	25	19 x 102	< 0.3	< 0.3	0.4	0.6	1.2	1.8	3.0	4.5	6.0	80.1	400.5
	25	25 x 102	< 0.3	< 0.3	< 0.3	< 0.3	0.6	1.0	1.7	2.5	3.4	61.2	306.1
	25	38 x 38	< 0.3	0.5	0.7	0.9	1.8	2.7	4.4	6.6	8.8	40.2	201.7
	25	51 x 51	0.8	1.3	1.9	2.4	4.8	7.1	11.8	--	--	29.0	147.2
	38	38 x 38	< 0.3	< 0.3	< 0.3	0.3	0.7	1.0	1.7	2.5	3.3	93.0	464.8
	51	51 x 51	< 0.3	< 0.3	< 0.3	< 0.3	0.4	0.6	1.1	1.6	2.2	119.5	599.2
600	16	25 x 102	4.5	7.5	11.3	--	--	--	--	--	--	18.7	94.3
	25	19 x 19	1.2	2.0	3.0	4.0	8.1	12.1	--	--	--	21.2	106.4
	25	19 x 102	0.9	1.5	2.3	3.0	6.1	9.1	--	--	--	33.5	167.9
	25	25 x 102	1.2	2.0	2.9	3.9	7.9	11.8	--	--	--	25.6	128.6
	25	38 x 38	1.8	3.1	4.7	6.2	12.5	--	--	--	--	17.3	87.8
	25	51 x 51	3.2	5.3	8.0	10.6	--	--	--	--	--	12.3	62.9
	38	38 x 38	0.6	1.0	1.5	2.1	4.2	6.3	10.5	--	--	37.5	187.6
	51	51 x 51	0.3	0.5	0.8	1.0	2.0	3.1	5.1	7.6	10.2	49.6	249.3
800	16	25 x 102	11.8	--	--	--	--	--	--	--	--	8.8	45.3
	25	19 x 19	3.8	6.3	9.4	12.5	--	--	--	--	--	12.6	63.9
	25	19 x 102	2.9	4.8	7.1	9.5	--	--	--	--	--	20.1	99.7
	25	25 x 102	3.1	5.2	7.8	10.5	--	--	--	--	--	15.2	77.3
	25	38 x 38	5.4	8.8	--	--	--	--	--	--	--	9.3	48.5
	25	51 x 51	9.1	--	--	--	--	--	--	--	--	6.0	30.7
	38	38 x 38	1.9	3.1	4.6	6.2	12.3	--	--	--	--	23.1	116.2
	51	51 x 51	1.0	1.6	2.3	3.0	5.9	8.9	--	--	--	27.1	136.6
1000	25	19 x 19	9.1	--	--	--	--	--	--	--	--	6.8	35.7
	25	19 x 102	7.0	11.8	--	--	--	--	--	--	--	11.0	53.2
	25	25 x 102	7.7	--	--	--	--	--	--	--	--	8.3	42.7
	38	38 x 38	4.3	7.1	10.7	--	--	--	--	--	--	14.2	71.3
	51	51 x 51	2.0	3.3	5.0	6.7	--	--	--	--	--	20.4	102.7
1200	38	38 x 38	8.5	--	--	--	--	--	--	--	--	9.2	46.2
	51	51 x 51	3.9	6.6	9.9	--	--	--	--	--	--	13.6	68.5
1400	51	51 x 51	7.6	12.6	--	--	--	--	--	--	--	6.7	34.2

**NOTES:**

1. All gratings were tested in accordance with the ANSI Standard: GRP Composites Grating Manual for Pultruded and Moulded Grating and Stair Treads.
2. Maximum Recommended Load represents a 5:1 factor of safety on Ultimate Capacity.
3. For covered grating use a multiplier of 0.5. This is limited to gratings of 1" - 2" depths. It is not recommended covering 3/4" or 1/2" gratings.
4. Max recommended and ultimate loads do not change as a result of adding a 1/8" deep covered plate.
5. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

# Load Tables - Fibergrate® Moulded Gratings

Alternate thickness Fibergrate grating concentrated point load tables (32mm x 38mm x 38mm) can be found on our website - [fibergrate.uk](http://fibergrate.uk) - under *Products, Moulded Grating, Fibergrate Moulded Gratings* and click on *Additional Load Tables*.



\* Also represents load data for Micro-Mesh 38mm deep x 19mm square top mesh grating (1219mm x 3658mm) panel.

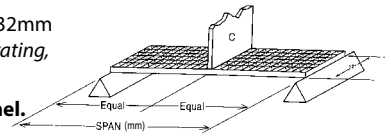
MOULDED GRATING CONCENTRATED POINT LOAD TABLES - DEFLECTION IN MILLIMETRES									
CLEAR SPAN (mm)	STYLE		LOAD (kN)						
	DEPTH (mm)	MESH (mm x mm)	0.2	0.5	1.0	2.0	4.0	6.0	9.0
600	16	25 x 102	4.2	10.5	--	--	--	--	--
	25	25 x 102	< 0.3	0.6	1.3	2.7	5.5	8.3	12.5
	25	38 x 38	0.3	0.8	1.6	3.2	6.3	9.5	--
	25	51 x 51	2.2	5.2	10.3	--	--	--	--
	38*	38 x 38	< 0.3	< 0.3	0.6	1.3	2.6	3.8	5.8
	51	51 x 51	< 0.3	< 0.3	0.4	0.9	1.7	2.6	3.9
800	16	25 x 102	7.5	--	--	--	--	--	--
	25	25 x 102	0.6	1.5	2.9	5.7	11.4	--	--
	25	38 x 38	0.6	1.5	2.9	5.9	11.8	--	--
	25	51 x 51	5.0	12.1	--	--	--	--	--
	38*	38 x 38	< 0.3	0.6	1.3	2.5	5.1	7.6	11.4
	51	51 x 51	< 0.3	< 0.3	0.6	1.3	2.6	3.9	5.8
1000	25	25 x 102	1.0	2.6	5.1	10.3	--	--	--
	25	38 x 38	1.1	2.7	5.4	10.8	--	--	--
	25	51 x 51	9.1	--	--	--	--	--	--
	38*	38 x 38	0.4	1.1	2.2	4.3	8.6	--	--
	51	51 x 51	< 0.3	0.5	1.1	2.3	4.7	7.0	10.6
1200	25	25 x 102	1.7	4.1	7.9	--	--	--	--
	25	38 x 38	1.7	4.2	8.5	--	--	--	--
	38*	38 x 38	0.7	1.6	3.2	6.5	--	--	--
	51	51 x 51	0.3	0.8	1.7	3.4	6.8	10.2	--
1400	38*	38 x 38	0.9	2.2	4.4	8.8	--	--	--

## NOTES:

1. All gratings were tested in accordance with the ANSI Standard: GRP Composites Grating Manual for Pultruded and Moulded Grating, and Stair Treads.
2. Maximum Recommended Load represents a 5:1 factor of safety on Ultimate Capacity.
3. For covered grating use a multiplier of 0.5. This is limited to gratings of 1" - 2" depths. It is not recommended covering 3/4" or 1/2" gratings.
4. Max recommended and ultimate loads do not change as a result of adding a 1/8" deep covered plate.
5. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

# Load Tables - Fibergrate® Moulded Gratings

Concentrated line load tables for alternate thickness Fibergrate grating (19mm x 25mm x 102mm, 19mm x 38mm x 38mm, 32mm x 38mm x 38mm) and Micro-Mesh® 13mm grating can be found on our website - fibergrate.uk - under Products, Moulded Grating, Fibergrate Moulded Gratings and click on Additional Load Tables.



\* Also represents load data for Micro-Mesh 38mm deep x 19mm square top mesh grating (1219mm x 3658mm) panel.

Moulded GRATING CONCENTRATED LINE LOAD TABLES - DEFLECTION IN MILLIMETRES										MAX RECOM. LOAD (kN/m of width)	ULTIMATE CAPACITY (kN/m of width)
CLEAR SPAN (mm)	STYLE		LOAD (kN/m of width)								
	DEPTH (mm)	MESH (mm xmm)	0.7	1.5	5.0	10.0	15.0	20.0	30.0		
400	16	25 x 102	1.0	2.2	7.2	--	--	--	--	8.6	43.0
	25	19 x 19	< 0.3	0.5	1.6	3.2	4.8	6.4	9.6	9.9	49.7
	25	19 x 102	1.0	2.2	7.2	--	--	--	--	8.6	43.0
	25	25 x 102	< 0.3	0.5	1.6	3.1	4.7	6.3	9.4	12.0	60.0
	25	38 x 38	< 0.3	0.9	3.4	7.1	10.8	--	--	7.9	39.8
	25	51 x 51	0.6	1.5	5.4	11.0	--	--	--	5.7	28.6
	38*	38 x 38	< 0.3	0.3	1.0	1.9	2.8	3.7	5.5	18.0	90.3
	51	51 x 51	< 0.3	< 0.3	0.5	0.9	1.3	1.7	2.5	22.8	114.2
600	16	25 x 102	2.8	6.0	--	--	--	--	--	5.6	28.4
	25	19 x 19	0.8	1.7	5.6	11.3	--	--	--	6.5	32.7
	25	19 x 102	2.8	6.0	--	--	--	--	--	5.6	28.4
	25	25 x 102	0.7	1.4	4.8	9.5	--	--	--	7.8	39.3
	25	38 x 38	1.2	2.3	7.1	--	--	--	--	5.2	26.3
	25	51 x 51	2.1	4.2	--	--	--	--	--	3.7	19.0
	38*	38 x 38	0.4	0.9	2.7	5.4	8.1	10.7	--	11.7	58.7
	51	51 x 51	< 0.3	0.4	1.4	2.8	4.1	5.5	8.2	15.5	77.7
800	16	25 x 102	5.4	12.0	--	--	--	--	--	4.1	20.8
	25	19 x 19	1.8	3.8	12.4	--	--	--	--	4.9	24.8
	25	19 x 102	5.4	12.0	--	--	--	--	--	4.1	20.8
	25	25 x 102	1.5	3.1	10.4	--	--	--	--	5.9	29.9
	25	38 x 38	2.6	5.7	--	--	--	--	--	3.9	19.8
	25	51 x 51	4.1	9.2	--	--	--	--	--	2.8	14.1
	38*	38 x 38	0.9	1.9	6.1	12.2	--	--	--	8.9	44.4
	51	51 x 51	0.4	0.9	3.0	6.0	8.9	11.9	--	11.5	57.8
1000	25	19 x 19	3.4	7.3	--	--	--	--	--	3.8	19.5
	25	19 x 102	8.9	--	--	--	--	--	--	1.2	6.5
	25	25 x 102	2.9	6.2	--	--	--	--	--	4.7	23.7
	25	38 x 38	5.1	10.5	--	--	--	--	--	3.0	15.6
	25	51 x 51	8.7	--	--	--	--	--	--	2.4	12.0
	38*	38 x 38	1.6	3.5	11.6	--	--	--	--	7.2	36.0
	51	51 x 51	0.7	1.6	5.2	10.4	--	--	--	9.2	46.5
1200	25	19 x 19	5.7	--	--	--	--	--	--	3.8	18.5
	25	19 x 102	5.4	11.5	--	--	--	--	--	3.9	20.2
	25	51 x 51	10.0	12.2	--	--	--	--	--	3.2	15.4
	38*	38 x 38	2.7	5.7	--	--	--	--	--	5.8	29.2
	51	51 x 51	1.2	2.6	8.7	--	--	--	--	7.7	38.8
1400	38*	38 x 38	3.8	8.2	--	--	--	--	--	5.2	26.1
	51	51 x 51	2.0	4.4	--	--	--	--	--	6.5	32.9

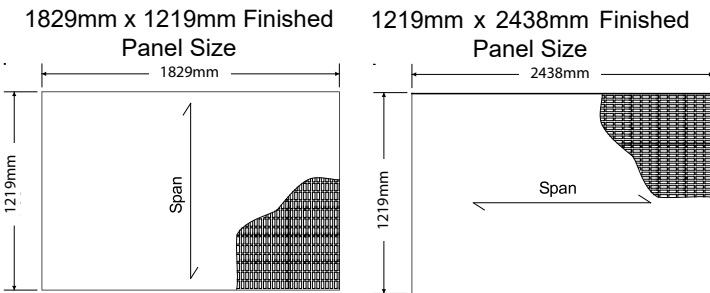
**NOTES:**

1. All gratings were tested in accordance with the ANSI Standard: GRP Composites Grating Manual for Pultruded and Moulded Grating and Stair Treads.
2. Maximum Recommended Load represents a 5:1 factor of safety on Ultimate Capacity.
3. For covered grating use a multiplier of 0.5. This is limited to gratings of 1" - 2" depths. It is not recommended covering 3/4" or 1/2" gratings.
4. Max recommended and ultimate loads do not change as a result of adding a 1/8" deep covered plate.
5. Gratings in this table are not rated for motorized vehicle traffic. For these applications, please select appropriate High Load Capacity grating.

# High Load Capacity Grating Details

Moulded High Load Capacity (HLC) grating is yet another product in the arsenal of engineered Glass reinforced plastic (GRP) solutions by Fibergate. While capitalizing on most of the traditional benefits of moulded grating products - high strength, corrosion resistance, fire retardancy, non conductivity and low maintenance - this specially manufactured moulded GRP product has been engineered to carry forklift loads that traditional moulded GRP grating products are unable to support.

With a 48% open surface area, Fibergate Moulded HLC grating is available in a 1829mm x 1219mm or 1219mm x 2438mm panel size with depths of 38mm and 51mm. High load capacity moulded grating is now available in Fibergate's Vi-Corr®, Corvex® and FGI-AM® resin systems (see resin details for colour options). Surface options include either a smooth surface or an Aluminium Oxide (A/O) grit surface. Fibergate Moulded HLC grating merits an ASTM E-84 flame spread rating of 25 or less and a Class 1 Fire Rating.

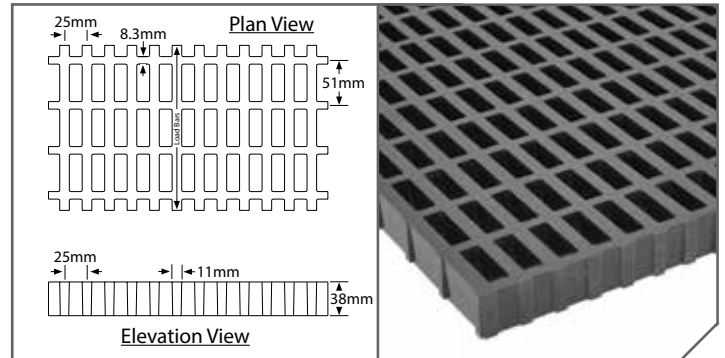


**Note:**  
Load carrying bars are oriented across the narrow (1219mm) dimension of the panel. Panels furnished with closed bars all sides..

**Note:**  
Load carrying bars are oriented across the long (2438mm) dimension of the panel. Panels furnished with closed bars all sides.

## HLC 38mm Deep x 25mm x 51mm Rectangular Mesh

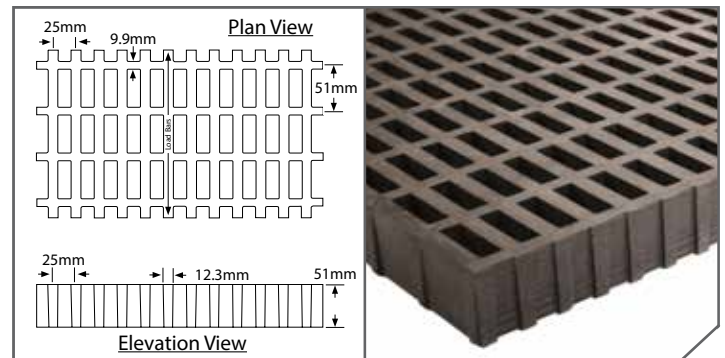
# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
39	11mm	48%	25mm	30.3 kg/m <sup>2</sup>



Section Properties per m of Width: A = 1.58x10<sup>6</sup>mm<sup>2</sup> I = 1.90x10<sup>6</sup>mm<sup>4</sup> S = 9.68x10<sup>4</sup>mm<sup>3</sup>

## HLC 51mm Deep x 25mm x 51mm Rectangular Mesh

# of Bars/ m of Width	Load Bar Width	Open Area	Load Bar Centres	Approximate Weight
39	12.3mm	48%	25mm	41.0 kg/m <sup>2</sup>



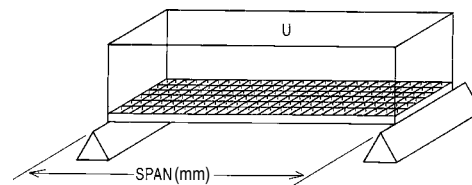
Section Properties per m of Width: A = 2.17x10<sup>6</sup>mm<sup>2</sup> I = 1.83x10<sup>6</sup>mm<sup>4</sup> S = 1.76x10<sup>5</sup>mm<sup>3</sup>

## Allowable Spans for Vehicular Loads

	Wheel Load (kg) - 1/2 Axle Load +30% Impact	Load Distribution		Allowable Span <sup>2,3</sup>	
		Parallel To Axle (mm) <sup>1</sup>	Perpendicular To Axle (mm)	38mm Deep HLC Moulded Grating	51mm Deep HLC Moulded Grating
AASHTO Standard Truck <sup>4</sup> / 14,515 kg Axle Load Dual Wheels(*formerly AASHTO H-20)	9,434	508 + 102	203	356mm	432mm
Automobile Traffic / 2,268 kg Vehicle 680 kg Load / 55% Drive Axle Load	998	203 + 102	203	660mm	813mm
4,536 kg Capacity Forklift / 6,532 kg Vehicle 11,068 kg Total Load / 85% Drive Axle Load	6,114	279 + 102	279	330mm	432mm
2,722 kg Capacity Forklift / 4,445 kg Vehicle 7,167 kg Total Load / 85% Drive Axle Load	3,960	178 + 102	178	304mm	406mm
907 kg Capacity Forklift / 1,905 kg Vehicle 2,812 kg Total Load / 85% Drive Axle Load	1,554	102 + 102	102	483mm	635mm

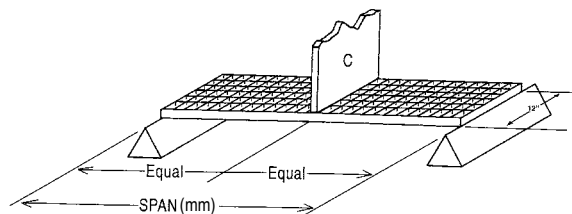
- Notes:**
- Load is carried by the grating load bars immediate under wheel + four additional load bars adjacent to wheel.
  - Allowable Span is based on a 6.4mm maximum deflection and a Factor of Safety of 2.5. Other criteria may be required by certain construction codes. Check code requirements to 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 Fibergate 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.

# HLC Grating Load Charts



**Uniform Line Load Table - Deflection in Millimetres**

Span (mm)	Style		UNIFORM LOAD (kN/m <sup>2</sup> )										MAXIMUM RECOMMENDED LOAD (kN/m <sup>2</sup> )	ULTIMATE CAPACITY (kN/m <sup>2</sup> )
	Depth (mm)	Mesh (mm)	5	7	10	15	20	25	30	35	40	45		
400	38	25 x 51	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	0.3	0.3	0.3	0.5	751	1876
	51	25 x 51	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	832	2075
600	38	25 x 51	< 0.3	< 0.3	0.5	0.7	1.0	1.3	1.6	1.9	2.2	2.5	337	843
	51	25 x 51	< 0.3	< 0.3	0.3	0.5	0.6	0.8	0.9	1.0	1.2	1.3	444	1109
800	38	25 x 51	0.9	1.2	1.7	2.5	3.4	4.2	5.0	5.9	6.7	7.4	189	469
	51	25 x 51	0.4	0.6	0.9	1.4	1.8	2.3	2.8	3.2	3.7	4.1	251	629
1000	38	25 x 51	1.9	2.7	3.9	5.9	7.8	9.5	11.5	--	--	--	100	256
	51	25 x 51	1.2	1.6	2.3	3.4	4.6	5.7	6.8	8.0	9.1	10.3	160	398



**Concentrated Line Load Table - Deflection in Millimetres**

Span (mm)	Style		Concentrated Line LOAD (kN/m of width)										MAXIMUM RECOMMENDED LOAD (kN/m of width)	ULTIMATE CAPACITY (kN/m of width)
	Depth (mm)	Mesh (mm)	1.5	5.0	10.0	20.0	30.0	40.0	50.0	60.0	70.0	85.0		
400	38	25 x 51	< 0.3	0.5	0.5	1.2	1.8	1.8	2.2	2.6	3.0	4.1	157	471
	51	25 x 51	< 0.3	< 0.3	0.3	0.6	0.8	1.1	1.3	1.6	1.8	2.2	178	536
600	38	25 x 51	< 0.3	0.8	1.5	2.9	4.3	5.7	7.1	8.5	10.0	--	101	303
	51	25 x 51	< 0.3	0.4	0.7	1.5	2.3	3.1	3.9	4.7	5.5	6.7	130	393
800	38	25 x 51	0.5	1.7	3.4	6.7	10.1	--	--	--	--	--	75	227
	51	25 x 51	0.3	1.0	1.9	3.7	5.6	7.5	9.3	11.2	--	--	102	308
1000	38	25 x 51	1.0	3.2	6.3	12.5	--	--	--	--	--	--	60	181
	51	25 x 51	0.6	1.9	3.6	7.2	10.9	--	--	--	--	--	77	233

**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. Fibergate recommends a maximum deflection of 6.4mm 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: GRP Composites Grating Manual for Pultruded and Moulded Grating, and Stair Treads.

# Stair Solutions

## Stair Treads

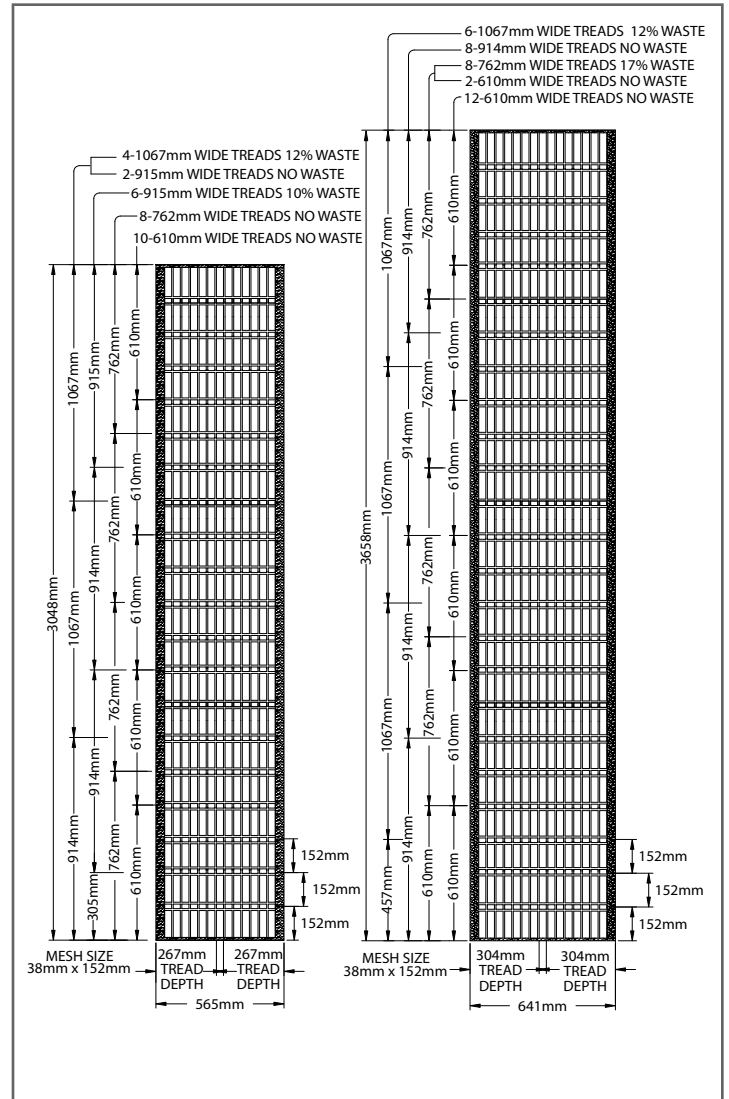


Fibergrate provides several slip and corrosion-resistant products for your stairway safety needs. Our complete stair solution line includes panels in a one-piece moulded configuration for new or replacement steps; covered stair treads to replace deteriorating concrete steps; or stair tread covers designed to add

slip and corrosion resistance to existing metal, concrete or wood steps. Stair treads are available in a one-piece moulded configuration engineered to exceed OSHA and other model building code standards for safety, strength, durability and corrosion resistance.

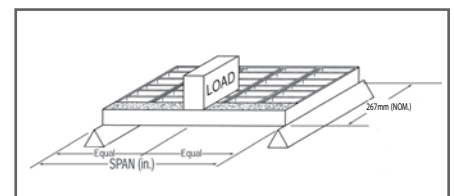
## Fibertred® Panels

Fibertred stair treads are available in the same high performance resin formulations as Fibergrate grating. Unique cutting channels spaced at 152mm intervals provide efficient utilization when custom fitting treads into stairways. These channels also ensure that all standard stair tread widths are terminated with closed ends. Up to five 610mm wide stair treads can be cut from each side of a single panel. A 38mm wide gritted strip is moulded in on both sides of the panel for superior slip resistance.



## Fibertred® Load Table

Load (kN)	Span (mm)	600	800	1000	1200
	Span/150	4.0	5.3	6.7	8.0
1		1.1	2.4	4.7	8.8
2		2.2	5.0	9.5	---



### NOTES:

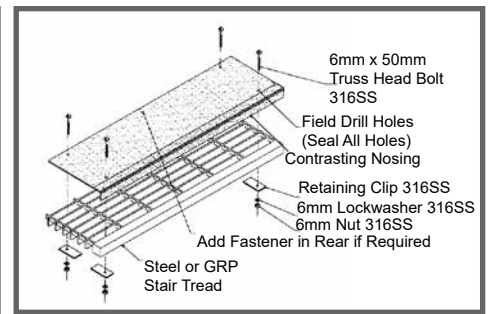
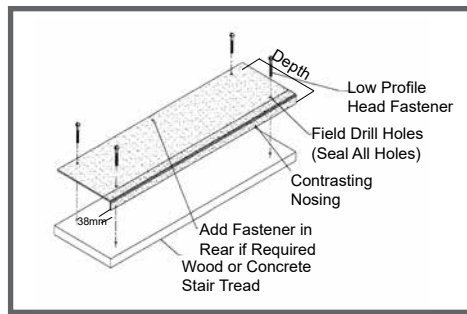
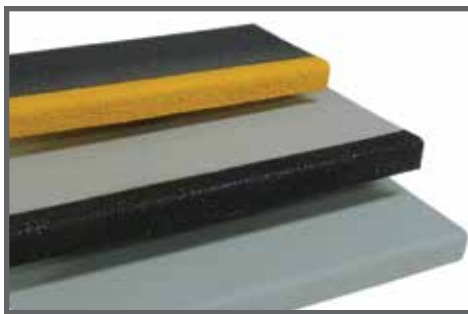
1. It is suggested that stair tread deflections be limited to Span/150. Deflections based on this ratio are at the top of the table.
2. Deflections in the body of the table are for concentrated loads of both 1 kN and 2 kN. A concentrated load is applied at the center line of the tread, over a width of 102mm and a depth of 152mm, starting at the nosing edge to simulate the landing of a foot.
3. Stair treads with square mesh or for longer spans are available by custom order. Please contact Fibergrate for more information.

# Stair Solutions

## Stair Tread Covers

Fiberplate® stair tread covers are a convenient way to provide solid slip-resistant footing for existing stairs. Stair tread covers may be installed over wood, concrete or metal steps. Standard colour is dark grey with a highly visible safety yellow nosing and light grey for architectural applications.

An integral aluminium oxide grit-top surface provides secure footing for maximum safety and a highly durable tread. Reinforced with a woven glass mat for durability and impact resistance, these tread covers come in 203mm, 229mm, 254mm, 279mm and 305mm depths. The standard thickness is 3.2mm with 6.4mm thick covers available for heavy duty applications. Standard 3658mm panels are easily cut to size during installation, or are available pre-cut to custom lengths. Also available in a phosphorescent glow in the dark coating for the nosing area.



## Covered Stair Treads / Load Table

Designed as an alternative to high-maintenance concrete or slippery metal steps, covered stair treads are designed for commercial and architectural applications where aesthetics and low maintenance are important considerations. Covered stair treads are available in Corvex® resin and have an integral grit top which comes in two textures — coarse and fine which is suitable even for barefoot traffic. They can withstand many corrosive environments including salt, continuous moisture and constant cleaning. The tread is 80 percent lighter than that of a precast concrete step. Simple wood working tools with abrasive blades make for easy fabrication and installation.



Installed with standard WLP clip assembly

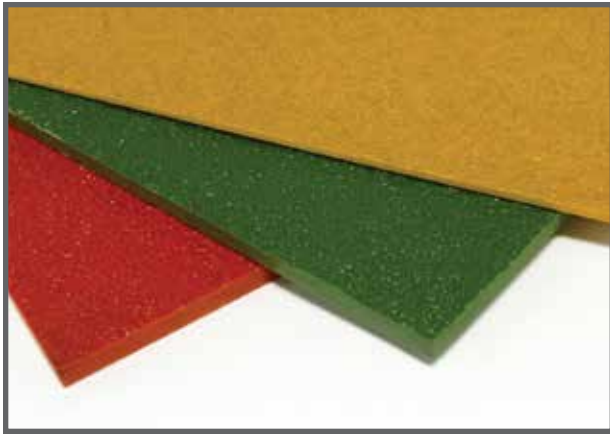
Tread Type (Depth x Width)	Load (kN)	Span (mm)			
		800	1000	1200	1400
		L/D=150			
		5.3	6.7	8.0	9.3
41mm x 270mm	1	2.3	4.3	9.0	--
	2	3.7	9.7	--	--
41mm x 311mm	1	1.8	3.3	6.2	--
	2	3.5	6.8	11.5	--
54mm x 270mm	1	1.0	1.7	3.0	4.8
	2	2.0	3.6	6.1	9.4
54mm x 311mm	1	0.8	1.5	2.6	4.2
	2	1.4	3.1	5.3	8.0

## Optional Hidden Hold Down System

Contact your local Fiberplate sales person for more information. Visit [fiberplate.uk](http://fiberplate.uk) or call us at +44(0) 191 402 1920.



# Floor Plate



Fiberplate® is manufactured by building up multiple layers of GRP reinforcement and specially-formulated resins. The result of this process is a solid composite panel offering both bidirectional strength and corrosion resistance.

This specially designed product is nonporous, is easily cleaned by a high pressure washer and can withstand cleaning solutions. Available in all moulded grating resin systems (see page 7). Standard panel sizes are (mm) 914 x 3048, 1219 x 2438, 1219 x 3658 and 1829 x 3048. (Custom sizes also available.)

## Fiberplate® Load and Deflection Data

\*Important: 3.2mm Plate designed for use as covering only; not recommended for load bearing service.

Depth (mm)	Span (mm)	Concentrated Load-Full Panel								Uniform Load-Full Panel						Concentrated Load Required to Produce Deflection Equal to 1% of Span (kN)	
		Maximum Load (kN)		Load (kN)						Maximum Load (kN/m²)		Load (kN/m²)					
		Norm <sup>1</sup>	Firm <sup>2</sup>	0.5	1.0	1.5	2.5	4.0	Norm <sup>1</sup>	Firm <sup>2</sup>	2.0	3.0	4.0	5.0	7.0		
6.4	400	0.9	0.5	1.9	3.5	5.1	8.2	--	8.2	4.8	0.9	1.1	1.3	1.5	1.9	1.2	
	600	0.8	0.5	2.9	6.0	9.0	--	--	1.5	0.8	6.6	9.6	12.5	--	--	1.0	
	800	0.6	0.4	3.6	8.8	--	--	--	--	--	--	--	--	--	--	0.7	
9.5	400	2.2	1.4	0.9	1.6	2.3	3.7	5.8	11.8	7.4	0.6	0.9	1.2	1.5	2.0	2.8	
	600	1.2	0.7	2.3	4.1	5.8	9.4	--	3.1	2.0	3.0	4.5	6.0	7.5	10.5	1.4	
	800	0.7	0.4	4.1	7.9	11.7	--	--	2.0	1.2	7.6	11.5	--	--	--	0.8	
	1000	0.7	0.5	6.1	--	--	--	--	0.9	0.5	--	--	--	--	--	0.9	
12.7	400	4.1	2.6	< 0.3	0.5	0.8	1.5	2.6	14.8	6.0	0.9	1.0	1.0	1.1	1.2	5.6	
	600	2.4	1.5	0.8	1.7	2.6	4.5	7.4	5.6	3.1	2.4	3.1	3.7	4.4	5.7	3.0	
	800	1.3	0.8	2.3	4.4	6.5	10.6	--	4.6	4.1	4.6	6.6	8.6	10.6	--	1.4	
	1000	1.1	0.7	4.7	8.5	12.3	--	--	0.6	-0.6	7.6	11.7	--	--	--	1.4	
19.1	400	10.8	6.8	< 0.3	0.4	0.6	0.9	1.4	47.4	29.6	< 0.3	0.3	0.4	0.5	0.8	12.9	
	600	6.3	3.9	0.6	0.9	1.3	2.0	3.0	11.9	7.4	1.0	1.4	1.8	2.1	2.9	7.6	
	800	5.6	3.5	0.8	1.3	1.9	3.0	4.7	7.0	4.4	2.1	2.9	3.7	4.4	6.0	7.1	
	1000	4.4	2.7	0.9	1.6	2.4	4.0	6.3	1.9	1.2	3.7	4.9	6.2	7.4	9.9	5.9	

Notes:

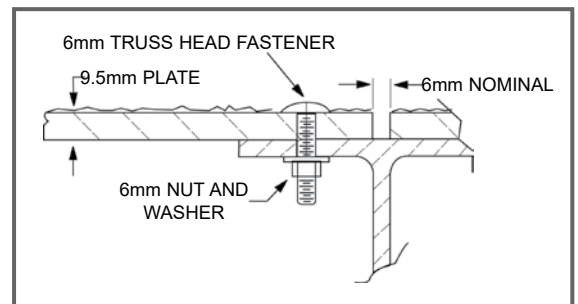
- (1) Normal load is the load which will produce a L/D of 125 or 9.5mm maximum.
- (2) Firm is the load which will produce a L/D of 200 or 6.4mm maximum.
- (3) Loads for Short Span Normal and Firm have been limited to allow for shearing effects.
- (4) Clear Span is 51mm less than width of grating.

### Plate Weight

3.2mm - 6.4 kg/m<sup>2</sup>, 6.4mm - 12.7 kg/m<sup>2</sup>, 9.5mm - 19.0 kg/m<sup>2</sup>,  
13mm - 25.4 kg/m<sup>2</sup>, 19mm - 38.1 kg/m<sup>2</sup>

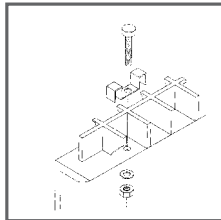
### Installation

- Install using ordinary hand tools and masonry blade
- Fastener assembly kits may be ordered directly from Fibergate
- Space fasteners a minimum of 305mm-610mm apart
- On concrete, use masonry bit and concrete anchor bolts
- On steel, wood or GRP, drill and bolt with truss head assembly
- It is recommended that all cut edges and holes be sealed

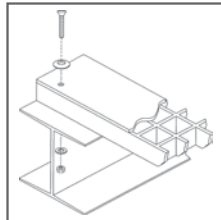




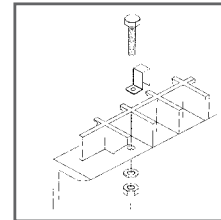
## Clip Assemblies For Moulded Products



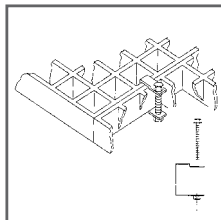
**TYPE M HOLD DOWN CLIPS:** Secure panels to a support in the same manner as Type J Clips, but designed to use two adjacent grating bars for a more secure fit. Similar in design to metal grating saddle clips.



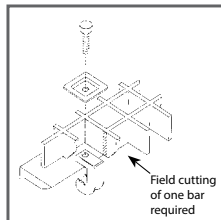
**TYPE WLP STRUCTURAL CLIPS:** Secure covered grating or plate to a structure. (Also available in 304 SS)



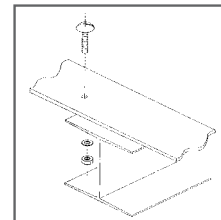
**TYPE J HOLD DOWN CLIPS:** Secure grating panels to support frames.



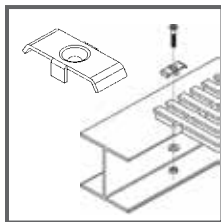
**TYPE F END PANEL CLIPS:** Provide a simplified factory method for joining factory edges of adjacent abutting panels.



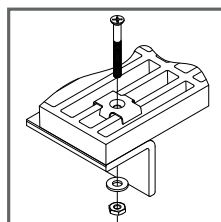
**TYPE G HOLD DOWN CLIPS:** Attach grating to any structural member flange, 19mm or smaller in thickness, with no drilling required.



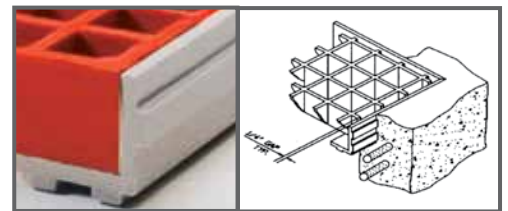
**TYPE H (TRUSS HEAD) STRUCTURAL CLIPS:** Secure plate to a structure.



**TYPE EI HOLD DOWN CLIP:** Secure panels to a support.



**TYPE E-1 HOLD DOWN CLIP:** Secure panels to a support.



### EZ ANGLE® EMBEDMENT ANGLE:

Is precision-designed for solid seating of 25mm, 38mm, 51mm, and 76mm deep gratings. EZ Angle embedment angle is stocked in 6096mm lengths for immediate shipment. For animated installation instructions, visit our resource center at [fibergrate.uk](http://fibergrate.uk).

## Fibergrate® Pedestals



Made with the same adherence to quality as all Fibergrate products, specially designed pedestals for square mesh moulded grating are manufactured to provide safe support for elevated flooring. Pedestal supported floors are versatile; they can be modified or moved from place to place as necessary and pedestals are generally much less expensive than beam support systems. Adjustable pedestals are available in heights from 83mm to 1829mm (with additional bracing). Pedestals are available with 38mm or 51mm single heads or quad heads to fit Fibergrate grating.

## Rubber Feet for Moulded Grating



Specially designed rubber feet are an economical way to create a raised, ergonomic grating workmat for use around machines, lathes and in wet areas. With the rubber feet, facilities have a cost-effective solution to elevate grating needed for drainage or waterflow and safe, ergonomic platforms. The feet raise the grating 13mm above the ground, and along with the open mesh, protect workers by allowing chips and fluids to fall below the standing surface eliminating slip and fall hazards.

## Sealing and Bonding Kits

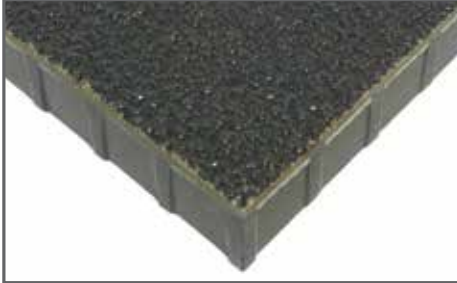
To maintain corrosion resistance and structural integrity, Fibergrate offers epoxy clear coating, in a spray can\*, for protecting the exposed ends of cut panels and other components. One spray can coats approximately 30 linear metres of cut grating.

Bonding kits come in a natural, unpigmented colour.

\*237 ml sealing kits are still available with minimum order requirements (each 237 ml covers 6-12 linear metres).

# Other Moulded Products

## Covered Grating



Covered grating is often used in loading and storage areas. Other applications include food processing facilities where covered grating walkways prohibit contamination to conveyor or work surfaces below; facilities where covered grating provides a walking surface and controls subsurface odours; walkways over tank tops and vats; and solid flooring where narrow heels might present a tripping hazard with open mesh grating. Fibergrate® covered grating includes a GRP gritted plate cover secondarily affixed to a moulded grating panel. Covered grating offers a strong, level surface for foot or cart traffic and provides approximately 50% higher stiffness values than that of open mesh grating. Its standard grit top cover assures secure footing.

Fibergrate covered grating consists of a 3.2mm or 6.4mm deep plate applied to standard Fibergrate grating depths. Fibergrate covered grating is available in Corvex®, Vi-Corr®, FGI-AM®, ELS and XFR resin systems.

### Notes:

1. Type WLP Hold Down Clips are recommended to secure Fibergrate covered grating panels to structural supports in order to eliminate potential damage to the covered grating. Fibergrate provides 8 WLP Hold Down clips per panel.
2. For load data see pages 9-11 and use a multiplier of 0.5. This is limited to gratings of 25mm - 51mm depths. It is not recommended covering 19mm or 13mm gratings.

## Work Platform Solutions



Work station platforms from Fibergrate are available in a variety of styles, heights and sizes to provide a safe, slip-resistant, corrosion-resistant and ergonomic solution for your facility. From portable one-piece workstands to fixed large-scale access platforms, Fibergrate will help you find the perfect fit for your working environment.

**Safe-T-Stand®:** Safe-T-Stand platforms have a grit top which provides a safe, slip-resistant surface, while their resilient design eases the strain on feet, legs and back muscles. Stands are available in 51mm, 102mm, 153mm, 204mm and 254mm heights and have skid resistant rubber feet for added safety.

The proven strength, impact resistance and overall durability of GRP construction make Safe-T-Stand platforms equally usable in any process industry or manufacturing environment. Standard Safe-T-Stand platforms are manufactured using a specially designed, USDA-approvable, food-grade resin for food and beverage processing plants. The full line of Fibergrate resin systems is available for non-food applications.

**Fibergrate® Custom Platform Solutions:** Fibergrate's turnkey approach to providing custom platform solutions include design, fabrication and installation services. From simple portable workstations to complex multifaceted platforms, the experienced personnel at Fibergrate can provide your facility with the perfect custom platform solution.

# Chemical Resistance Guide

Chemical Environment	% Concentration	Temp C	Fibergrate® Moulded				Safe-T-Span® Pultruded	
			Vi-Corr®	Corvex®	FGI-AM®	XFR	VEFR	ISOFR
Acetic Acid	50	MAX	C	C	C	I	C	C
Acetone	100	23.8	S	I	I	I	I	N
Alcohols	100	48.8	C	I	I	S	I	I
Alum	ALL	MAX	C	C	C	C	C	C
Aluminium Chloride	ALL	MAX	C	C	C	C	C	C
Aluminium Fluoride	20	23.8	C	I	I	I	I	I
Ammonium Hydroxide	30	23.8	C	N	N	N	I	N
Ammonium Salts-Neutral	ALL	48.8	C	C	C	S	C	S
Ammonium Salts-Aggressive	ALL	23.8	S	I	I	I	T	N
Aromatic Solvents	ALL	23.8	T	N	N	N	N	N
Barium Salts	ALL	MAX	C	C	C	C	C	C
Benzene	100	60	I	I	I	I	I	N
Black Liquor (Pulp Mill)	ALL	MAX	C	I	I	I	I	N
Bleach Liquor (Pulp Mill)	ALL	MAX	C	I	I	N	I	N
Calcium Hydroxide	25	MAX	C	S	S	I	S	I
Calcium Hypochlorite	ALL	MAX	C	I	I	I	I	N
Calcium Salts	ALL	MAX	C	C	C	C	C	C
Carbon Tetrachloride	100	23.8	C	I	I	S	S	N
Chlorinated Hydrocarbons	100	23.8	T	T	T	N	T	T
Chlorine Dioxide	SAT	60	C	N	N	N	S	N
Chlorine Water	SAT	48.8	C	I	I	I	I	N
Chlorine, Wet	SAT	MAX	C	N	N	N	N	N
Chlorobenzene	100	23.8	S	N	N	N	N	N
Chlorobenzene	ALL	Up to 37.7	C	N	N	N	N	N
Chloroform	100	23.8	N	N	N	N	N	N
Chromic Acid	50	60	S	S	S	N	I	N
Citric Acid	ALL	MAX	C	C	C	C	C	C
Copper Cyanide Plating	ALL	51.6	C	S	S	N	S	I
Copper Salts	ALL	MAX	C	C	C	C	C	C
Crude Oil (Sweet or Sour)	ALL	MAX	C	C	C	C	C	C
Dichlorobenzene	100	23.8	T	N	N	N	N	N
Ethers	ALL	23.8	T	N	N	N	N	N
Ferric Chloride	100	MAX	C	C	C	C	C	C
Ferric Salts	ALL	MAX	C	C	C	C	C	C
Fluoride Salts+HCl	ALL	23.8	C	S	S	I	I	N
Fluosilicic Acid	10	23.8	C	S	S	S	S	I
Formaldehyde	37	65.5	C	I	I	I	S	I
Formic Acid	25	37.7	C	S	S	I	S	I
Fuel (Diesel, Jet, Gasoline)	ALL	37.7	C	C	C	C	C	C
Glycerine	100	MAX	C	C	C	C	C	C
Green Liquor (Pulp Mill)	ALL	MAX	C	N	N	N	I	N
Hydrobromic Acid	48	MAX	S	S	S	I	I	N
Hydrochloric Acid	10	MAX	C	S	S	C	S	S
Hydrochloric Acid	30	MAX	C	S	S	I	I	I
Hydrochloric Acid (concentrated)	ALL	Up to 82.2	I	N	N	N	N	N
Hydrocyanic Acid	ALL	MAX	C	I	I	I	S	I
Hydrofluoric Acid	20	23.8	S	N	N	N	N	N
Hydrogen Peroxide	30	23.8	C	N	N	I	S	N
Lactic Acid	100	MAX	C	C	C	C	C	C
Lime Slurry	SAT	MAX	C	C	C	C	C	C
Lithium Chloride	SAT	MAX	N	N	N	N	N	N
Lithium Salts	ALL	MAX	C	C	C	C	T	T
Magnesium Salts	ALL	MAX	C	C	C	C	C	C
Maleic Acid	100	MAX	C	S	S	C	S	I
Mercury Chloride	100	MAX	C	C	C	C	C	C
Nickel Salts	ALL	MAX	C	C	C	C	C	C
Nitric Acid	20	48.8	C	S	S	I	I	I
Nitric Acid	35	37.7	C	N	N	I	I	N
Nitric Acid	40	Ambient	I	N	N	N	N	N
Nitric, Hydrofluoric	20:2	23.8	I	N	N	N	N	N
Nitrous Acid	10	23.8	C	C	C	C	C	C
Ozone for Sewage Treatment	ALL	37.7	C	C	C	C	C	C
Perchloroethylene	100	23.8	S	N	N	I	I	N
Phenol	10	23.8	C	N	N	N	I	N
Phenol	88	Ambient	S	N	N	N	N	N
Phosphoric Acid	85	MAX	C	C	C	C	C	S
Phosphoric Acid, Super	115	MAX	C	I	I	S	S	N
Potassium Hydroxide	10	48.8	C	I	I	N	S	N
Potassium Salts	ALL	MAX	C	C	C	C	C	C
Silver Nitrate	100	MAX	C	C	C	C	C	C
Sodium Cyanide	ALL	23.8	C	I	I	I	S	I
Sodium Hydroxide	50	MAX	C	I	I	N	I	N
Sodium Hydroxide	10	MAX	C	N	N	N	N	N
Sodium Hypochlorite (Stable)	10	37.7	C	S	S	S	S	I
Sodium Salts-Neutral	ALL	MAX	C	C	C	C	C	C
Sodium Salts-Aggressive	ALL	23.8	S	I	I	I	T	N
Sulfur Dioxide	SAT	MAX	C	S	S	S	S	S
Sulfuric Acid	25	MAX	C	S	S	S	S	I
Sulfuric Acid	50	MAX	C	S	S	S	S	N
Sulfuric Acid	75	37.7	C	I	I	I	I	N
Toluene	100	48.8	S	I	I	N	I	N
Trichloroethane 1,1,1	ALL	23.8	S	I	I	I	I	N
Trisodium Phosphate	50	MAX	C	I	I	I	I	N
Water (Fresh, Salt, Moderate D.I.)	100	MAX	C	C	C	C	C	C
Wet Chlorine/Hydrochloric Acid	10-20	Up to 176.6	S	N	N	N	N	N
White Liquor (Pulp Mill)	ALL	MAX	C	I	I	I	S	N
Zinc Chloride Plating	ALL	23.8	C	S	S	S	S	N
Zinc Salts	100	MAX	C	C	C	C	C	C

C - Continuous exposure of the grating to the Chemical Environment listed at the temperature listed.

S - Frequent exposure of the grating to splashes and spills from the Chemical Environment listed with that environment at the temperature listed.

I - Infrequent exposure of the grating to splashes and spills from the Chemical Environment listed with that environment at the temperature listed and the spill immediately cleaned up or washed from the grating.

N - Not recommended for the concentrations and temperatures listed.

T - Test

Consult Fibergrate for corrosion recommendations at concentrations, temperatures or chemicals not listed in this guide.

MAX TEMP is 82.2°C for ViCorr and Pultruded VEFR; 65.5°C for Corvex, FGI-AM, XFR and Pultruded ISOFR.

The information in this Corrosion Guide is correct to the best of Fibergrate's knowledge. It is based on extensive experience with GRP grating in corrosive applications. Because actual use conditions differ and mixtures of corrosives will occur in service, the end user must test for use under actual conditions. Fibergrate's responsibility for claims arising from breach of warranty, negligence or otherwise is limited to the purchase price of the material sold by Fibergrate. Test coupons are available upon specific request.

# Fibergrate Products & Services



## Fibergrate® Moulded Grating

Fibergrate® moulded gratings are designed to provide the ultimate in reliable performance, even in the most demanding conditions. Fibergrate offers the widest selection in the market with multiple resins and more than twenty grating configurations available in many panel sizes and surfaces.



## Safe-T-Span® Pultruded Industrial & Pedestrian Gratings

Combining corrosion resistance, long-life and low maintenance, Safe-T-Span® provides unidirectional strength for industrial and pedestrian pultruded grating applications.



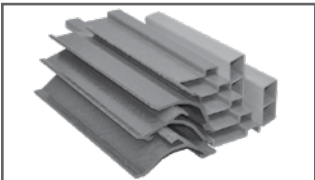
## Dynaform® Structural Shapes

Fibergrate offers a wide range of standard Dynaform® pultruded structural profiles for industrial and commercial use, including I-beams, wide flange beams, round and square tubes, bars, rods, channels, leg angles and plate.



## Dynarail® & DynaRound™ Guardrail, Handrail & Ladder

Easily assembled from durable components or engineered and prefabricated to your specifications, Dynarail square tube and DynaRound round tube railing systems and Dynarail safety ladder systems meet or exceed OSHA and strict building code requirements for safety and design.



## Custom Composite Solutions

Combining Fibergrate's design, manufacturing and fabrication services allows Fibergrate to offer custom composite solutions to meet our client's specific requirements. Either through unique pultruded profiles or custom open molding, Fibergrate can help bring your vision to reality.



## Design & Fabrication Services

Combining engineering expertise with an understanding of GRP applications, Fibergrate provides turnkey design and fabrication of GRP structures, including platforms, catwalks, stairways, railings, and equipment support structures.



## Worldwide Sales & Distribution Network

Whether a customer requires a platform in a mine in South Africa to grating on an oil rig in the North Sea, or walkways in a Wisconsin cheese plant to railings at a water treatment facility in Brazil; Fibergrate has sales and service locations throughout the world to meet the needs and exceed the expectations of any customer.

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