



NANTONG STRONGWORLD FRP PRODUCTS CO.,LTD.

We Produce Molded Grating

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StronGrate™ Molded Fiberglass Grating

StronGrate™ molded fiberglass grating is manufactured by interlacing reinforcing glass fibre roving within a polyester resin, thermally cured in the mould. Gratings produced using this technique yield a product having 30-35%(by total weight) of fiberglass reinforcement. For fire retardant protection, the resins used are complete with fire retardant additive to obtain class 1 fire spread rating of 25 or less as per ASTM E-84. UV inhibitors and antioxidant are included into our recipe of gratings to achieve better UV protection.

StronGrate™ molded Fiberglass grating was developed for corrosive applications where light weight, impact resistant, corrosion resistant and esp resistant is a must. StronGrate™ molded fiberglass grating is a better alternative to traditional steel grating products.

Features of StronGrate™ Molded Fiberglass Grating

Chemical Resistance

With approximately 60-70% resin content, StronGrate™ molded fiberglass grating offers superb chemical resistance to a variety of acids and caustics. StronGrate™ is offered in an array of corrosion resistant resins designed for any environment, from light or moderately corrosive environments to extremely corrosive applications.

Light Weight

Have you ever tried to lift a panel of steel grating without a crane or lift? Two men can easily and comfortably lift a 1220x3660mm panel of StronGrate™ molded fiberglass grating. With an average weight of around 15-20 kilos per square meter, StronGrate™ molded fiberglass grating is easy to carry and install, it is also easy to remove for maintenance access or cleaning underneath. Simply unscrew the clips and lift out. No special lifting equipment required!



Fire Retardancy

All StronGrate™ molded fiberglass gratings are designed to exhibit a minimum of a Class 1 flame spread rating when tested in accordance with ASTM E-64 flame spread rating Tunnel Test (comparable to UL, F20, ANSI/ULFA, No. 255 and UL9C No. 8-1). StronGrate™ molded fiberglass gratings are available in a variety of resins offering an array of flame spread rating and smoke densities, from as low as 5 flame spread rating and 5 in smoke density with our molded phenolic grating product.

Non-Skid & Safety

StronGrate™ is available in either a concave meshless top or a gridded top. Each offers superior slip resistance to traditional steel grated walking surfaces.



Concave Top Surface



Gridded Top Surface



Applied Top Surface

Low Maintenance/Maintenance Free

With resin and pigment blended throughout StronGrate™ molded fiberglass grating, the grating will never require painting. Coupled with our corrosion resistant attachment systems, Nanlong StrongWorld provides maintenance-free walkway systems. You install it and forget about it!

Other Positive Features

StronGrate™ molded fiberglass gratings are also:

- Electrically and thermally non-conductive
- Easy to cut and/or install
- Ultra-violet resistant
- Provided in a number of grating thicknesses and panel sizes
- Offers bi-directional strength characteristics
- Impact Resistance



Industries Using Fiberglass Grating

Offshore & Marine
 Petro-chemical & Refining
 Communications
 Wastewater
 Transportation & Transit
 Aerospace
 Automotive
 Pulp & Paper
 Mining
 Metal Plating
 Food & Beverage

Toxic
 Electrical & Power Generation
 Computer and H-tech
 Recreational Water Parks & Pools
 Zoon and Aquariums
 Military
 Medical
 Shipping
 Many others.





StronGrate™ Molded Fiberglass Grating Resin Selection

Nantong StrongWorld manufactures molded fiberglass grating in a variety of resins, each with its own unique performance characteristics. The resin selection is paramount in determining the corrosion resistance of the finished product. Please consult the Nantong StrongWorld chemical resistance guide for assistance in selecting the proper resin for your application, or call Nantong Strongworld at +86-513-86665691 for technical assistance.

Nantong Strongworld's resin designations are comprised of two components: the resin type and its ASTM E-84 flame spread rating.

Type VEFR-25 is a premium vinyl ester resin with a flame spread rating of 25 or less. Type VEFR-25 resin provides the most chemical resistant molded product offered in the industry. Designed to withstand the harshest chemical environments over a broad range of acids and caustics, it is primarily used in petrochemical, waste water, mining, and plating applications where the grating is subject to frequent and direct contact with harsh chemicals. Type VEFR-10 is manufactured with the same high-quality vinyl ester resin but with an enhanced flame spread rating of 10 or less for those applications requiring more flame resistance, such as an offshore platform. The standard color for the VEFR-25 is orange, and the standard color for the VEFR-10 is dark gray.

Type IFR-25 is a premium isophthalic polyester resin with a flame spread rating of 25 or less. Type IFR-25 provides an intermediate level of chemical resistance and is the correct resin choice for grating subjected to splash and spill contact with harsh chemicals, and is a very good general purpose resin at a reduced cost compared to the premium vinyl ester resin. Type IFR-10 is the same high quality isophthalic polyester resin but with an enhanced flame spread rating of 10. The standard color for the IFR-25 is green and the IFR-10 grating is dark gray.



Type FG-30 is StrongGrate™ molded fiberglass grating manufactured using a premium food grade polyester resin containing no harmful ingredients and is certified by the resin manufacturer. Each panel cured and detergent washed prior to shipping. This grating possesses a flame spread rating of 30 and the standard color is light gray.

Type GFR-25 is an orthophthalic polyester resin with a flame spread rating of 25 or less providing moderate chemical resistance. Nantong StrongWorld's Type GFR-25 grating is perfect for use in water/wastewater applications, and in the wave zone areas of offshore platforms where the environment is moderate. Although Type GFR-25 is the least chemical resistant resin, it still offers superior performance to traditional flooring products such as steel, aluminum and wood, and is the most economical resin available. The standard colors for the GFR-25 gratings are yellow and dark gray. Type CFR-10, an orthophthalic polyester resin with a flame spread rating of 10 is available upon request.

Type MP-5 is Nantong StrongWorld's molded phenolic grating where fire resistance, low smoke, and low toxic fumes are critical. Tested in accordance with ASTM E-84, Type MP-5 resin has a flame spread rating of 5 and smoke density rating of only 5. Our Type MP-5 molded phenolic grating is typically used in confined spaces, subways, offshore and other applications where fire resistance and low smoke generation is absolutely necessary. The standard color in which the Type MP-5 is available is chocolate brown. However, phenolic painting of the grating can be performed to obtain a light gray finish.

Resin Type	Resin Base	Description	Corrosion Resistance	Stainant Colors	Max. Temp.
VHR-25	Vinyl Ester	Superior Corrosion Resistance and Fire Retardant	Excellent	Brown	65°C
VHR-10	Vinyl Ester	Superior Corrosion Resistance and High Fire Retardant	Excellent	Dark Gray	65°C
FR-25	Isophthalic Polyester	Industrial Grade Corrosion Resistance and Fire Retardant	Very Good	Green	65°C
FR-10	Isophthalic Polyester	Industrial Grade Corrosion Resistance and High Fire Retardant	Very Good	Dark Gray	65°C
GR-25	Orthophthalic Polyester	Moderate Corrosion Resistance and Fire Retardant	Moderate	Yellow, Dark Gray	65°C
GR-10	Orthophthalic Polyester	Moderate Corrosion Resistance and High Fire Retardant	Moderate	Yellow, Dark Gray	65°C
FD-25	Ford Grade	Moderate Corrosion Resistance	Moderate	Light Gray	65°C
MR-5	Phenolic	Low Smoke and Superior Fire Retardant	Very Good	Oxidation-Brown	150°C

Conductive Top Grating: All of StronGrate™ molded Grating products can be provided with a specially formulated carbon black surface, eliminating hazardous static electricity when properly grounded. Available with all of the above resins, StronGrate™ Conductive Gratings are primarily used in the high-tech electronic industries, munitions and arsenal manufacturing plants and other sparking sensitive environments where sophisticated equipment may be damaged due to static electricity. The surface electric resistance of StronGrate™ Conductive Grating is 1×10^5 ohms to 5×10^5 ohms.





StonGrate™ Molded Fiberglass Grating Selection

StonGrate™ Molded Fiberglass Grating Available

Item	Height mm	Mesh mm	Bearing Bar Thickness Top/Bottom mm	Standard Dimension mm	Approx. Wt. Kg/m ²	Open Area	Category
1	13	30x30	6.8/5.0	1000x2000, 1220x2440, 1500x1800	6.1	76%	I
2	13	30x30	7.8/6.0	1000x2000, 1220x2440	6.9	81%	I
3	25	30x30	6.8/5.0	1000x2000, 1220x2440	7.0	76%	I
4	13	30x30	6.8/5.0	1220x2440	7.0	76%	I
5	25	Diamond 30x30	7.8/6.0	1220x2440	14.4	76%	I
6	25	40x40	6.8/5.0	1001x2001, 1001x2001, 1001x4001	4	84%	I
7	40	40x40	7.8/6.0	1001x2001, 1001x2001, 1001x4001	6.0	84%	I
8	25	30x30	6.8/5.0	1220x2440, 1220x4000	6.9	80%	II
9	25	30x30	6.8/5.0	1000x2000, 1000x2000, 1000x4000, 1000x4000, 800x1012, 810x2000, 1220x2440, 1220x2440, 1220x4000	12.0	68%	II
10	25	40x40	6.8/5.0	1001x2001, 1001x2001, 1001x4001, 1247x4047	12.1	67%	II
11	25	100x20	7.8/6.0	1001x2001, 1001x2001, 1001x4001	12	87%	II
12	25, 47.5	100x20	6.8/5.0	1220x2440	13.0	87%	II
13	25, 40	100x20	6.8/5.0	1220x2440	18.0	82%	II
14	25	30x30	7.8/6.0	1220x2440	11.0	78%	II
15	25	30x30	6.8/5.0	1000x2000, 1000x2000, 1000x4000, 1000x4000, 800x1012, 810x2000, 1220x2440, 1220x2440, 1220x4000, 1220x4000	14.0	68%	II
16	25	40x40	6.8/5.0	1001x2001, 1001x2001, 1001x4001, 1247x4047	14.0	67%	II
17	38	30x30	7.8/6.0	1000x2000, 1000x2000, 1000x4000, 1000x4000, 800x1012, 810x2000, 1220x2440, 1220x2440, 1220x4000, 1220x4000	18.0	68%	II
18	40	40x40	7.8/6.0	1001x2001, 1001x2001, 1001x4001, 1247x4047	18.0	67%	II
19	50	50x50	8.8/6.0	1220x2440, 1524x4000	23.0	78%	II

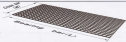


Item	Height mm	Mesh mm	Bearing Bar Thickness, Top/Bottom mm	Standard Dimension mm	Approx. Wt. Kg/m ²	Open Area	Category
20	14	22x22/40x40	1.0/1.0	1217x1817	10.5	40%	II
21	25	15x15/30x30	0.5/0.5	1220x2650, 1220x1800	16.8	40%	II
22	30	20x20/40x40	1.0/0.5	1800x2600, 1800x2000, 1800x1800, 1217x1817	18	40%	II
23	38	15x15/30x30	1.0/0.5	1220x2650, 1220x1800	23.5	40%	II
24	40	25x25/40x40	1.0/0.5	1800x2600, 1800x2000, 1800x1800, 1800x 2080	25.7	40%	II
25	50	12x12/40x40	1.0/0.5	1217x1817	28	50%	II
26	50	25x25/50x50	0.5/0.5	1220x2650, 1220x1800	28.5	50%	II
27	58	25x152	0.5/0.5	1220x1650	32.5	50%	IV
28	58	38x152 T-Shape Bar	15.0/0.5	1220x1650	19.6	50%	IV
29	58	25x50	11.0/0.5	1220x1650	30.3	48%	V
30	58	25x50	12.0/0.5	1220x1650	40	48%	V
31	60	38x38	11.0/0.5	1220x2650, 1220x1800	30.4	54%	V
32	50	38x180 Not Stretched	0.5/0.5	1220x2650	15.0	77%	VI
33	58	25x180 Not Stretched	15.0/0.5	1220x2650	21	48%	VI
34	60	58x50	0.5/0.5	1220x1800	28.8	78%	VI
35	72	76x76	0.5/0.5	405x2668	5.7	80%	VI
36	78	70x100	0.5/0.5	1220x2650	22.6	80%	VI
37	78	38x152	0.5/0.5	1220x2650	15.9	82%	VI
38	78	38x100	0.5/0.5	1220x2650	16.4	85%	VI
39	48	60x220	0.5/0.5	1788x2738	8.9	87%	VI
40	180	83x180	12.0/0.5	875x950	26	78%	VI
41	78	25x152	1.0/0.5	565x2650	22.1	82%	Stair Tread
42	78	38x152	1.0/0.5	565x2650	17	80%	Stair Tread

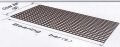


Category I. StrongGrate™ Screening /Fencing Grating

Item	Height mm	Mesh mm	Bearing Bar Thickness, Top/Bottom mm	Standard Dimension mm	Approx. Wt. Kg/m ²	Open Area
1	13	38x38	3.5/3.5	1220x250, 1220x3660, 1220x1200	5.1	78%
2	13	50x50	2.5/3.5	1220x3660, 1220x4000	5.5	81%
3	25	100x50	3.5/3.5	1500x2500, 1500x1000	7.3	76%
4	13	50x50 Diamond	3.5/3.5	1220x3660	7.5	78%
5	25	38x38 Diamond	2.5/3.5	1220x3660	14.4	70%
6	25	50x50	3.5/3.5	1600x2000, 1600x3000, 1600x4000	6	84%
7	40	50x50	2.5/3.5	1600x2000, 1600x3000x4000	9.5	84%

Specifications 1. Screen mesh 2. Square Mesh				
Screen Mesh	38			
Screen Size	6, 6' x 6, 0			
Screen Size	25			
Screen Size	6, 6' x 6, 0			
Screen Size	50			
Screen Size	78%			
Approx. Weight kg/m ²	5.1			
Bearing Bar Properties Per Area of Mesh			Product page / link http://www.stronggrate.com	Wt/L 1220x1220 1220x3660 3660x1220
A	0.0001 m ² 0.0001			
B	0.0001 m ² 0.0001			
C	1.1601 m ² 0.0001			

The Mesh: 13mm high, 38x38mm mesh advanced screen features an 78% open area for superior air flow. is intended for use as a screen primarily for air intakes in military, commercial and industrial applications. It is often used for wall fan screens, and as a barrier to prevent contact with electrical equipment and pumps.

Specification						
Value High	Minimum					
General Data						
Mesh Size	50					
Meshing Bar Width (mm)	7, 8/8, 9					
Meshing Bar Spacing (mm)	50					
Mesh Bar Width (mm)	7, 8/8, 9					
Mesh Bar Spacing (mm)	50					
Open Area	82%					
Approx. Weight (kg/m²)	0.5					
Engineering Properties Per Meter of Mesh			<table><tr><td>WELL</td></tr><tr><td>1255540000</td></tr><tr><td>1255540000</td></tr></table>	WELL	1255540000	1255540000
WELL						
1255540000						
1255540000						
A	0.00002 m²/m²					
I	0.00002 m²/m²					
W	0.00002 m²/m²					

The Mesh: 10mm high, 50x50mm mesh molded grating features an 82% open area for superior air flow, is a multiple -purpose light weight screen, can be used for a wide range of applications including fencing, machinery guards, dividers in factories, cages for tools, equipment, warehouse and animal. It can also be used as fully supported slip-resistant flooring where wet or slippery conditions exist.



Specification			
20mm High, 1000x2000 Rectangular Mesh			
Spacing - Mesh Section	10		WGL 1000x2000 1000x4100
QUALITY SET	5. 5 / 5. 5		
REINFORCEMENT	60		
SPACING SET	5. 5 / 5. 5		
Cross Bar Section	100		
SPACING SET	60		
Approx. Weight (kg/m²)	7. 5		

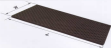
The Mesh: 100x60mm mesh, 20mm high meshed grating panel is designed to be used as fiberglass fencing, is an excellent investment in various sectors, including heavy industry and construction. Fiberglass fencing is of light weight, free of maintenance, corrosion resistance, ease of installation. The electronics sector makes particular use of fiberglass fencing due to its requirement for materials with electrical insulation properties, while it is installed in the airport sector because it is guaranteed to be non-magnetic and radio-transparent.

Fencing can also be supplied with FRP posts, Fixing solutions:

- 1st - Fixing with steel plate (removable)
- 2nd - Fixing with embedded formwork (removable)
- 3rd - Fixing using direct cementing (fixed).





Specification			
11mm High, 50x50mm Diamond Mesh			
Bar Width TUB	5, 50x50		Standard panel size 1220x3660
Diamond Mesh ADA	50x50		
Open Area	75%		
Approx. Weight kg/m ²	7.5		
			WXL 1220x3660

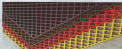
Specification				Standard panel size 1220x3660	
25mm High, 38x38mm Diamond Mesh					WXL
Bar Width TUB	7, 38x38				1220X3660
Diamond Mesh ADA	38X38				
Open Area	70%				
Approx. Weight kg/m ²	14.4				

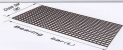
StrongGrate™ Diamond Grating could be used as Fiberglass security fencing, or electrostatically non-conductive (ENC) fencing, can be used instead of metal fencing anywhere, and it is most beneficial when used in places where there are corrosion concerns (FRP is non-corrosive), or conductivity issues (FRP fence is non-conductive and invisible to radar) . The FRP fencing materials are fire retardant.

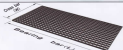
The fencing is made from molded FRP panels. It is light-weight, fire-retardant and corrosion-resistant. The hardware used to fasten it can be either FRP and plastic or typical galvanized steel bolts. Posts are made from structural FRP shapes. Hinges and latches for gates are made from galvanized steel. Can also be used as isolation panels for metallic fences.

Threaded fasteners bolt through the panels and tighten securely using Strongworld panel plugs. All nuts are located behind the fence, which makes criminal access nearly impossible. When criminals typically want to gain access through a chain-link fence or a steel fence, they use cutters and/or cutting torches. These tools are useless against Strongworld ENC Fence System. Also, if a criminal cuts a hole in chain-link fencing, they can remove items larger than the hole simply by expanding the chain-link fence. This is impossible with the Strongworld ENC fence. If a hole is created in the Strongworld ENC Fence System, only items smaller than the hole can be removed.

Non-metallic and non-conductive fence components are available.



Specification				
25 High, 82x82mm Square Mesh				
Bearing Bar Material	15		Standard panel is 1000	W82L
Bearing Bar Width, Fts	6, 6 1/8, 6			
Bearing Bar Quantity/A	60			
Gross Bar Quantity/A	66			
Open Area	84%			
Approx. Weight (kg/ft ²)	6, 6			

Specification			
40 High, 82x82mm Square Mesh			
Bearing Bar Material	15		Standard panel is 1000
Bearing Bar Width, Fts	7, 6 1/8, 6		
Bearing Bar Quantity/A	60		
Gross Bar Quantity/A	7, 6 1/8, 6		
Gross Bar Quantity/A	66		
Open Area	84%		
Approx. Weight (kg/ft ²)	6, 6		

The Mesh: 25mm and 40mm high, 83x83mm mesh molded grating panels are designed to screen the sun! 84% high mesh opening makes high light through, and very good air flow as well, and meets today's exacting needs for structural strength and aesthetic beauty. When you don't want high maintenance, don't want it to rust or spark, and you do want it rigid, strong, light and mostly chemically resistant, the 83x83mm mesh molded PE-Light through Grating is the one to specify. Also it can be used as fencing, ceiling and decorative grating.

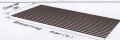




Category II. StonGrate™ Square/ Rectangular Mesh Grating

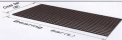
StonGrate™ Square/Rectangular mesh gratings are most of quite traditional configurations in comparison to other types . but they are still very common in the market, and are both versatile and flexible in industrial applications.

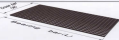
Item	Height, mm	Mesh, mm	Stearing Bar Thickness, Top/bottom, mm	Standard Dimensions, mm	Approx. Vt% Height	Open Area
1	25	25x25	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	8.5	88%
2	25	25x25	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	12.5	88%
3	25	40x40	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	10.1	87%
4	25	100x100	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	10	87%
5	25, 3.75	100x100	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	10.5	87%
6	25, 100	100x100	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	17.0	86%
7	25	200x200	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	11.0	78%
8	25	200x200	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	14.0	88%
9	25	40x40	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	10.0	87%
10	25	200x200	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	10.0	86%
11	25	40x40	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	10.0	87%
12	25	200x200	8.5/8.5.0	1200x2000, 1200x3000, 1500x2000, 1500x3000, 1800x2000, 1800x3000, 2000x2000, 2000x3000, 2400x2000, 2400x3000, 3000x2000, 3000x3000	20.0	78%

Specifications			
25mm High, 38x38mm Square Mesh			
Steering Bar	25		25mm 1200x2000 1200x2000
Steering Bar Width (mm)	8.5/8.5.0		
Steering Bar Spacing (mm)	25		
Grating Bar Material (mm)	8.5/8.5.0		
Grating Bar Spacing (mm)	25		
Open Area	88%		
Approx. Weight (kg)	0.8		

The Mesh: 25mm high, 38x38mm mesh molded grating made from the same mold for 20mm thick grating is designed to be used direct onto solid floor without need any support at a greatly reduced cost. Use with our ramps to create a seamless non-slip walking area .

Specification Plate and Mesh	
25mm High, 38x38mm Square Mesh	
Meshing Size	25
Meshing Size	38 x 38 x 38
Meshing Size	38
Meshing Size	38 x 38 x 38
Meshing Size	38
Meshing Size	38
Approx. Weight (kg/m ²)	1.25
Elimination Progressive Per Meter or Width	
A	1.15m ² 38.00"
I	0.38m ² 38.00"
B	0.76m ² 38.00"



Specification				Product panel size	WELL 	
25mm High, 40x40mm Square Mesh						
Meshing Size	25				1200 L x 2400 W 1000 L x 1800 W 1200 L x 4800 W 1000 L x 4800 W	
Meshing Size	40 x 40 x 40					
Meshing Size	40					
Meshing Size	40 x 40 x 40					
Meshing Size	40					
Meshing Size	40					
Approx. Weight (kg/m ²)	0.75					
Elimination Progressive Per Meter or Width						
A	1.15m ² 40.00"					
I	0.38m ² 40.00"					
B	0.76m ² 40.00"					

The Mesh: 25mm high, 38x38mm mesh molded grating is both versatile and flexible in industrial applications. Normally it can be used for pedestrian transit. It features symmetrical structure that leads to reduction of scraps caused by numerous of cuts(bearing bars in both direction).

25mm high, 40x40mm mesh grating panel is similar to 25mm high, 38x38mm mesh configuration, but it comes from metric design.

Specification of the product				Steel plate 10mm 1000x2000
20mm High, 100x25mm Rectangular Mesh Grating				
Surface Size	400			
Surface Size	800			
Surface Size	1200			
Surface Size	1600			
Surface Size	2000			
Surface Size	2400			
Surface Size	2800			
Surface Size	3200			
Surface Size	3600			
Surface Size	4000			
Surface Size	4400			
Surface Size	4800			
Surface Size	5200			
Surface Size	5600			
Surface Size	6000			
Surface Size	6400			
Surface Size	6800			
Surface Size	7200			
Surface Size	7600			
Surface Size	8000			
Surface Size	8400			
Surface Size	8800			
Surface Size	9200			
Surface Size	9600			
Surface Size	10000			
Surface Size	10400			
Surface Size	10800			
Surface Size	11200			
Surface Size	11600			
Surface Size	12000			
Surface Size	12400			
Surface Size	12800			
Surface Size	13200			
Surface Size	13600			
Surface Size	14000			
Surface Size	14400			
Surface Size	14800			
Surface Size	15200			
Surface Size	15600			
Surface Size	16000			
Surface Size	16400			
Surface Size	16800			
Surface Size	17200			
Surface Size	17600			
Surface Size	18000			
Surface Size	18400			
Surface Size	18800			
Surface Size	19200			
Surface Size	19600			
Surface Size	20000			
Surface Size	20400			
Surface Size	20800			
Surface Size	21200			
Surface Size	21600			
Surface Size	22000			
Surface Size	22400			
Surface Size	22800			
Surface Size	23200			
Surface Size	23600			
Surface Size	24000			
Surface Size	24400			
Surface Size	24800			
Surface Size	25200			
Surface Size	25600			
Surface Size	26000			
Surface Size	26400			
Surface Size	26800			
Surface Size	27200			
Surface Size	27600			
Surface Size	28000			
Surface Size	28400			
Surface Size	28800			
Surface Size	29200			
Surface Size	29600			
Surface Size	30000			
Surface Size	30400			
Surface Size	30800			
Surface Size	31200			
Surface Size	31600			
Surface Size	32000			
Surface Size	32400			
Surface Size	32800			
Surface Size	33200			
Surface Size	33600			
Surface Size	34000			
Surface Size	34400			
Surface Size	34800			
Surface Size	35200			
Surface Size	35600			
Surface Size	36000			
Surface Size	36400			
Surface Size	36800			
Surface Size	37200			
Surface Size	37600			
Surface Size	38000			
Surface Size	38400			
Surface Size	38800			
Surface Size	39200			
Surface Size	39600			
Surface Size	40000			
Surface Size	40400			
Surface Size	40800			
Surface Size	41200			
Surface Size	41600			
Surface Size	42000			
Surface Size	42400			
Surface Size	42800			
Surface Size	43200			
Surface Size	43600			
Surface Size	44000			
Surface Size	44400			
Surface Size	44800			
Surface Size	45200			
Surface Size	45600			
Surface Size	46000			
Surface Size	46400			
Surface Size	46800			
Surface Size	47200			
Surface Size	47600			
Surface Size	48000			
Surface Size	48400			
Surface Size	48800			
Surface Size	49200			
Surface Size	49600			
Surface Size	50000			
Surface Size	50400			
Surface Size	50800			
Surface Size	51200			
Surface Size	51600			
Surface Size	52000			
Surface Size	52400			
Surface Size	52800			
Surface Size	53200			
Surface Size	53600			
Surface Size	54000			
Surface Size	54400			
Surface Size	54800			
Surface Size	55200			
Surface Size	55600			
Surface Size	56000			
Surface Size	56400			
Surface Size	56800			
Surface Size	57200			
Surface Size	57600			
Surface Size	58000			
Surface Size	58400			
Surface Size	58800			
Surface Size	59200			
Surface Size	59600			
Surface Size	60000			
Surface Size	60400			
Surface Size	60800			
Surface Size	61200			
Surface Size	61600			
Surface Size	62000			
Surface Size	62400			
Surface Size	62800			
Surface Size	63200			
Surface Size	63600			
Surface Size	64000			
Surface Size	64400			
Surface Size	64800			
Surface Size	65200			
Surface Size	65600			
Surface Size	66000			
Surface Size	66400			
Surface Size	66800			
Surface Size	67200			
Surface Size	67600			
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Surface Size	68800			
Surface Size	69200			
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Surface Size	70000			
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Surface Size	78800			
Surface Size	79200			
Surface Size	79600			
Surface Size	80000			
Surface Size	80400			
Surface Size	80800			
Surface Size	81200			
Surface Size	81600			
Surface Size	82000			
Surface Size	82400			
Surface Size	82800			
Surface Size	83200			
Surface Size	83600			
Surface Size	84000			
Surface Size	84400			
Surface Size	84800			
Surface Size	85200			
Surface Size	85600			
Surface Size	86000			
Surface Size	86400			
Surface Size	86800			
Surface Size	87200			
Surface Size	87600			
Surface Size	88000			
Surface Size	88400			
Surface Size	88800			
Surface Size	89200			
Surface Size	89600			
Surface Size	90000			
Surface Size	90400			
Surface Size	90800			
Surface Size	91200			
Surface Size	91600			
Surface Size	92000			
Surface Size	92400			
Surface Size	92800			
Surface Size	93200			
Surface Size	93600			
Surface Size	94000			
Surface Size	94400			
Surface Size	94800			
Surface Size	95200			
Surface Size	95600			
Surface Size	96000			
Surface Size	96400			
Surface Size	96800			
Surface Size	97200			
Surface Size	97600			
Surface Size	98000			
Surface Size	98400			
Surface Size	98800			
Surface Size	99200			
Surface Size	99600			
Surface Size	100000			

The Mesh: 20mm high, 100x25mm mesh molded grating could be used widely in industrial applications as walkways, surface platforms, covers for pits, capable of sustaining the weight of manual trolleys. This mesh is compliance to the French 20mm ball norm.

We have another mould for 25mm high, 100x25mm mesh grating in metric, with slight difference in bar thickness, and in metric dimension of 1007x2007, 1007x3007, 1007x4007.

Specification				Steel plate 10mm 1007x2007 1007x3007 1007x4007
25mm High, 100x25mm Rectangular Mesh				
Surface Size	100			
Surface Size	200			
Surface Size	300			
Surface Size	400			
Surface Size	500			
Surface Size	600			
Surface Size	700			
Surface Size	800			
Surface Size	900			
Surface Size	1000			
Surface Size	1100			
Surface Size	1200			
Surface Size	1300			
Surface Size	1400			
Surface Size	1500			
Surface Size	1600			
Surface Size	1700			
Surface Size	1800			
Surface Size	1900			
Surface Size	2000			
Surface Size	2100			
Surface Size	2200			
Surface Size	2300			
Surface Size	2400			
Surface Size	2500			
Surface Size	2600			
Surface Size	2700			
Surface Size	2800			
Surface Size	2900			
Surface Size	3000			
Surface Size	3100			
Surface Size	3200			
Surface Size	3300			
Surface Size	3400			
Surface Size	3500			
Surface Size	3600			
Surface Size	3700			
Surface Size	3800			
Surface Size	3900			



25mm High, 25x100mm Square Mesh				VMSL	122500000	
25mm High, 25x100mm Square Mesh						
Grating Size	40	25mm High	VMSL	122500000		
Grating Bar Width	25					
Grating Bar Spacing	25					
Grating Bar Length	100					
Grating Bar Thickness	2.5					
Grating Weight	18.5	Engineering Properties for Metal or Glass				
A	2.55x10 ³ N/m ²					
B	1.45x10 ³ N/m ²					
C	1.15x10 ³ N/m ²					

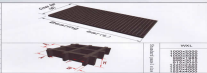
The Mesh: the same configuration as 25mm high, 25x100mm mesh molded grating, but more thicker bearing and cross bars, which results in increasing of loading capacity and improved resistance to mechanical damage. Can be used as walkways, surface platforms, covers for pits, capable of sustaining the weight of manual trolleys. This mesh is compliance to the French 20mm ball norm.

Specification				VMSL
25mm High, 50x50mm Square Mesh				
Grating Size	40			
Grating Bar Width	25, 31.75, 50			
Grating Bar Spacing	50			
Grating Bar Length	50			
Grating Bar Thickness	2.5			
Grating Weight	11.5			

The Mesh: 25mm high, 50x50mm mesh molded grating is very similar to 25mm thick, 50x50mm mesh grating, but features a bigger opening.

30mm high, 40x40mm mesh molded grating is designed in matrix with the following details.

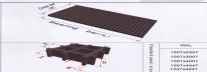
Specification	
30mm High, 18x18mm Square Mesh	
Series Code	30
Series A	7, 8, 9, 0
Series B	00
Series C	7, 8, 9, 0
Series D	00
Open Area	60%
Approx. Weight kg/m ²	18, 0
Recommended Dimensions Per Metric of Area	
A	1, 100x100" 1000"
B	2, 000x2, 000" 10, 000"
C	1, 000x100" 10, 000"

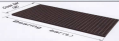


The Mesh: Most popular mesh configuration and thickness, numerous applications in industrial sections. According to the distance of supports the grating can sustain HS truck and lightweight vehicles. The symmetrical structure supports the loads in both direction allowing-for example-creation of holes for the passage of piping systems(without the necessity of additional support systems). Or the construction of service platforms supported only on four points.

40mm high, 40x40mm mesh molded grating is designed in metric with the following details.

Specification	
40mm High, 40x40mm Square Mesh	
Series Code	40
Series A	7, 8, 9, 0
Series B	00
Series C	7, 8, 9, 0
Series D	00
Open Area	60%
Approx. Weight kg/m ²	18, 0



Specifications				Standard Size WHL 1200x6000 1500x3000
38mm High, 38x38mm Square Mesh				
Overall Size (mm)	38			
Bar Width (mm)	38			
Bar Spacing (mm)	38			
Bar Thickness (mm)	38			
Panel Size (mm)	38			
Panel Weight (kg/m²)	19%			
Panel Weight (kg/m²)	25.5			
Engineering Properties (Per Meter of Width)				
A	$8.5 \times 10^{-4} \text{ m}^2/\text{m}^2$			
I	$4.000 \times 10^{-7} \text{ m}^4/\text{m}^2$			
B	$1.000 \times 10^{-7} \text{ m}^4/\text{m}^2$			

The Mesh: This square mesh configuration is popular too. Specially designed for maximum stiffness and strength without excessive weight. Increased bar thickness and panel height in comparison to 38mm high, 38x38mm mesh, which is able to be suitable to construct walkway, surface platforms, etc with spans up to 1500mm. The symmetrical structure can also significantly reduce cutting drops. (bearing bars in both direction). The square mesh design can retain strength when cut, such as having cutouts around piping systems.

Category III. StrongGrate™ Mini-mesh Grating

Item	Height mm	Mesh mm	Bearing Bar Thickness, Top/Bottom mm	Standard Dimension mm	Approx. Wt. kg/m²	Open Area
1	14	12x12	1.5/1.5	1200x600	18.5	42%
2	25	12x12	2.5/2.5	1200x600, 1500x3000	18.8	42%
3	38	12x12	3.5/3.5	1200x600, 1500x3000, 1800x4500, 1800x3000	19	42%
4	38	12x12	1.5/1.5	1200x600, 1500x3000	25.3	42%
5	38	12x12	2.5/2.5	1200x600, 1500x3000, 1800x4500, 1800x3000	25.7	42%
6	38	12x12	3.5/3.5	1200x600	19	38%
7	38	12x12	2.5/2.5	1200x600, 1500x3000	24.3	38%

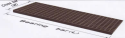
StronGrate™ Mini-mesh Grating provides a "Middle of the road" Solution to those applications where solid flooring is not permission due to airflow requirement, but where the openings must be smaller than our conventional StronGrate™ products. The StronGrate™ Mini-mesh flooring system has one-fourth opening of our standard 38mm square mesh gratings. The smaller openings prevent objects as small as 13mm from falling through, and because of the closer spacing of the bearing bars, StronGrate™ Mini-mesh panels provide an easier flooring for pushing cart, drum trolley and they comply with ADA(Americans with Disabilities Act of 1990) and DDA(Disability Discrimination act in UK) requirements for wheelchair floorings. Further, StronGrate™ Mini-Mesh panels meet the 15mm ball test for floors, a European safety requirement commonly used in some sectors of the offshore industry.

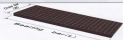




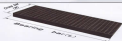
Specification			
14mm High, 20x20x13mm Mini Mesh			
Working Area	20		WELL
Working Area	7' 0" x 5' 0"		
Working Area	45		
Working Area	7' 0" x 5' 0"		
Working Area	30		
Working Area	7' 0" x 5' 0"		
Working Area	20		
Working Area	30%		
Working Area	100%		
Working Area	100%		100%

The Mesh, 14mm high mini-mesh molded grating has been created to be fixed directly to an existing solid surface. The small holes (just 13mm internal square) make it ideal for gutters, manholes, ramps and walkways etc.

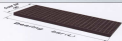
Specification				
25mm High, 13x13x25mm Mini Mesh				
Working Area	27		Standard panel size	WELL
Working Area	5' 0" x 5' 0"			1547W4557
Working Area	30			
Working Area	5' 0" x 5' 0"			
Working Area	30			
Working Area	5' 0" x 5' 0"			
Working Area	10			
Working Area	30%			
Working Area	100%			

Specification				
30mm High, Multi-Mesh Mini Mesh				
Grating, 30mm Height, 20 Mesh	20		WVPL 1 000 Paused P 1 000 Paused P 1 000 Paused P 1 000 Paused P	
Grating, 30mm Height, 20 Mesh	7. 5/5. 5			
Grating, 30mm Height, 20 Mesh	20			
Grating, 30mm Height, 20 Mesh	7. 5/5. 5			
Grating, 30mm Height, 20 Mesh	20			
Grating, 30mm Height, 20 Mesh	40			
Grating, 30mm Height, 20 Mesh	7. 5/5. 5			
Grating, 30mm Height, 20 Mesh	20			
Grating, 30mm Height, 20 Mesh	40			
Grating, 30mm Height, 20 Mesh	7. 5/5. 5			

The Mesh: 30mm high mini mesh welded grating is for medium loads, even with higher mechanical performance in comparison to the same height grating panels.

Specification			
30mm High, The Reinforced Mini Mesh			
Grating, 30mm Height, 20 Mesh	20		WVPL 1 000 Paused P 1 000 Paused P 1 000 Paused P 1 000 Paused P
Grating, 30mm Height, 20 Mesh	7. 5/5. 5		
Grating, 30mm Height, 20 Mesh	20		
Grating, 30mm Height, 20 Mesh	7. 5/5. 5		
Grating, 30mm Height, 20 Mesh	20		
Grating, 30mm Height, 20 Mesh	7. 5/5. 5	WVPL 1 000 Paused P 1 000 Paused P 1 000 Paused P 1 000 Paused P	WVPL 1 000 Paused P 1 000 Paused P 1 000 Paused P 1 000 Paused P
Grating, 30mm Height, 20 Mesh	20		
Grating, 30mm Height, 20 Mesh	40		
Grating, 30mm Height, 20 Mesh	7. 5/5. 5		
Grating, 30mm Height, 20 Mesh	20		

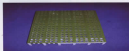


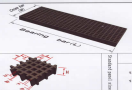
Specification			
40mm High, 20x20x40mm Mini Mesh			
Spacing - Grid Between 20 mm	20	 	
GRID TYPE	T, G/4, G		
Grid Length	40		
GRID - WGT	T, G/4, G		
Grids Per Square Ft	40		
Mini Mesh - Bar Width (mm)	T, G/4, G		
Mini Mesh Bar Thickness	30		WALL
Open Area	40%		1000 x 1000
Approx. Weight (kg/m ²)	20.7		1000 x 2000
			1000 x 3000
			1000 x 4000

The Mesh: 30mm high, 18x18x30x30mm and 40mm high, 20x20x40x40mm mini mesh grating are both designed to sustain semi-heavy and heavy loads(depending on span). But their dimensions are different to suit different occasions.

Specification			
30mm High, 18x18x30mm Mini Mesh			
Spacing - Grid Between 18 mm	18	 	
GRID TYPE	T, G/4, G		
Grid Length	30		
GRID - WGT	T, G/4, G		
Grids Per Square Ft	40		
Mini Mesh - Bar Width (mm)	G, G/4, G		
Mini Mesh Bar Thickness	18		WALL
Open Area	88%		1000 x 1000
Approx. Weight (kg/m ²)	18		

The Mesh: 30mm high, 18x18mm(9x9mm internal mesh) micro mesh molded grating with extremely small opening .The mesh prevents the passage of small object promoting high safety levels in working areas located under the grating(is compliance with offshore applications). The micro-mesh is characterized high mechanical resistance and is suitable for transit of light weight vehicles or for intensive foot traffic.



Specification				
50mm High, 25x25/50x50mm Mini Mesh				
Coating: Hot DIP/Zn coated	20	Standard panel size	WHL	1220x2000 1524x4000
Meshing for open, 1 side closed and 2 closed	50			
Grid size, top open, 1 side closed	5. 5/5. 5			
Grid size 2 closed	50			
Mini Mesh-Bar width 1 side	5. 5/5. 5			
Mini Mesh-Bar Center, O	25			
Open Area	88%			
Material Weight kg/m ²	50. 5			

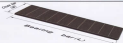
The Mesh: 50mm high, 25x25mm mesh molded grating with 17x17mm internal opening, which is slightly bigger in comparison to other mini-mesh, but could be used into where heavy loads request, still complies with the French 20mm ball norm.



Category IV, StronGrate™ LargeSpan Grating

Nantong Strongworld manufactures two models of molded fiberglass grating, which is designed specially for the applications where large spans are required or desired. LargeSpan engineered design maintains that high resin-to-glass ratio yet is approximately 80% stiffer than standard 38mm high molded fiberglass gratings. This translates into 1220mm spans with 500kgs/m² loading, producing less than 5mm deflection.

Item	Height mm	Mesh mm	Bearing Bar Thickness, Top/Bottom mm	Standard Dimension mm	Approx. Wt. Kg/m ²	Open Area
1	38	38x38	3.0/3.0, 3	1220x3660	22.5	82%
2	48	38x38	15.0/3.0, 3	1220x3660	18.8	82%

Specification			
38mm High, 38x38mm Rectangular Mesh			
Bearing Bar Width at Flange	40		Standard panel size
Bearing Bar Length	3.0/3.0, 3		
Bearing Bar Width at Flange	28		1220x3660
Bearing Bar Length	3.0/3.0, 3		
Open Area	82%		1220x3660
Approx. Weight kg/m ²	22.5		
Engineering Properties per Mesh at 38mm			
A	5.77x10 ³ mm ²		
I	4.77x10 ³ mm ⁴		
B	5.77x10 ³ mm ⁴		

StronGrate® 110 Series					
Steel Deck, 10g Yellow Electroplated Metal Mesh					
Bearing Bar Width	27		100L 1200x600		
Bearing Bar Spacing	15.5/16.5				
Mesh Size	30				
Mesh Width	15.5/16.5				
Deck Height	100				
Deck Area	0.75				
Actual Weight	12.5				
Engineering Properties Per Meter of Width					
A	0.000102×10^6				
I	0.000102×10^6				
W	0.000102×10^6				

Category V, StronGrate™ Molded Heavy Duty Grating

Size	Height mm	Mesh mm	Bearing Bar Thickness, Top/Bottom mm	Standard Dimension mm	Approx. Wt. Kg/m ²	Open Area
1	30	25/30	11.5/9.0	1000x600	50.3	40%
2	30	25/30	12.5/9.0	1000x600	41	40%
3	30	25/30	11.5/9.0	1000x600, 1000x400	50.4	54%

With most of traditional benefit of molded fiberglass grating products—high strength, corrosion resistance, fire retardancy, non-conductive, maintenance free, StronGrate™ molded heavy duty grating is yet another product in the arsenal of engineered fiberglass reinforced plastic solution, has been engineered to carry the forklift loads that traditional molded grating products are unable to support.



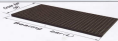
Specification				
50mm High, 25x50mm Rectangular Mesh Heavy Duty				
Working Area Width of Module	50		Standard panel size	WELL
Module B (mm)	11. 5(12. 5)			1 250x500mm
Working Area Depth	25			
Clearance Area Width (mm)	5. 5(7. 5)			
Module H (mm)	50			
Open Area	88%			
Approx. Weight (kg/m²)	10. 5			
Engineering Properties For Metal or WOOD				
A	$0.001 \times 10^3 \times 10 \text{ MPa}$			
E	$0.1 \times 10^3 \times 10 \text{ MPa}$			
W	$0.000 \times 10^3 \times 10 \text{ MPa}$			

The Mesh: 50mm high, 25x50mm mesh molded heavy duty grating is engineered to fork lift up to H-20 loads(H-20 represents 7,000kgs. wheel load (14,000 kgs. dual spaced wheel load) and is a heavy traffic rating). Propose smooth surface to prevent fork tyres from damaging grating surface during movements.

Specification				
50mm High, 25x50mm Rectangular Mesh Heavy Duty				
Working Area Width of Module	50		Standard panel size	WELL
Module B (mm)	11. 5(12. 5)			1 250x500mm
Working Area Depth	25			
Clearance Area Width (mm)	10. 5(12. 5)			
Module H (mm)	50			
Open Area	88%			
Approx. Weight (kg/m²)	11			
Engineering Properties For Metal or WOOD				
A	$0.000 \times 10^3 \times 10 \text{ MPa}$			
E	$0.10 \times 10^3 \times 10 \text{ MPa}$			
W	$0.000 \times 10^3 \times 10 \text{ MPa}$			

The Mesh: 50mm high, 25x50mm mesh molded heavy duty grating possesses the same philosophy as 38mm height, 25x50mm mesh model, but can sustain larger spans.



Specification				
60mm High, 28x38mm Square Mesh Heavy Duty				
Surface Area	27			
Weight	15.5/16.5			
Mesh Size	28			Yield:
Load Per	15.5/16.5			1200x2400 1200x2400
Mesh Size	28			
Open Area	54%			
Net Weight	50.4			

The Mesh: 60mm high, 28x38mm mesh matted grating is designed to fork lift up to 10,000 kgs. Suggest smooth surface to prevent fork tynes from damaging grating surface during movements. Could be used for the occasions where heavy loads demand. Symmetrical structure leads to reduction of scrapes caused by cutting.



Allow Spans for Vehicular Loads

	Wheel Loading(s) to Axle Load +30% Impact	Load Distribution		Allowable Span (ft.)	
		Parallel To Axle (1)	Perpendicular To Axle	Stren 100 Moltruded Grating	Stren 100 Moltruded Grating
 ADMT10 Standard Truck (4.0 Tons) by Axle Load Dead Weight (Formerly ADMT10 H200)	20,000	20'0" - 30'0"	30'0"	30'0"	40'0"
 Automobile Traffic 2,000 kg Vehicle 8000 lbs Vehicle 80% Drive Axle Load	10,000	20'0" - 30'0"	30'0"	30'0"	40'0"
 5 Ton Capacity Forklift 5,000 kg Vehicle 11,000 lbs Total Load 80% Drive Axle Load	22,000	20'0" - 30'0"	20'0"	30'0"	40'0"
 3 Ton Capacity Forklift 3,000 kg Vehicle 7,000 lbs Total Load 80% Drive Axle Load	16,000	10'0" - 30'0"	10'0"	30'0"	40'0"
 1 Ton Capacity Forklift 1,000 kg Vehicle 2,200 lbs Total Load 80% Drive Axle Load	10,000	10'0" - 30'0"	10'0"	40'0"	40'0"

Notes:

(1) Load is carried by the grating load bars immediately under wheel & two additional load bars, one on each side of wheel.

Allowable span is based on a Stren maximum deflection and a Factor of Safety of 2.0. Other criteria may be required by certain construction codes. Check code requirements to determine design criteria.

(2) 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 StrongGrate engineering for application assistance.

(3) Load based on the ADMT10 standard truck load as defined in ADMT10 LTPD bridge design specifications, 2nd Ed. This doesn't imply that the allowable span meets the deflection requirements of this specification.

Category VI - StrenGrate™ Moltruded Grating

Item	Height mm	Mod mm	Stearing Bar Thickness, Top/Bottom mm	Standard Dimension mm	Approx. WL kg/m ²	Open Area
1	50	100 x 100 Moltruded	10, 10/5, 10	1000 x 3000	15.8	17%
2	50	100 x 100 Moltruded	15, 10/5, 10	1000 x 3000	21	28%

StrenGrate™ Moltruded Grating manufactured by the moltrusion process (molded and extrusion process) contained a high number of fiberglass rovings placed in a unique unidirectional manner to deliver superior strength, but features all advantages like corrosion resistance, light weight, easy to install, etc. In the design cross ratio contrary only the top half of the grating, so fiberglass roving placed where they provide the most strength: in the lower half of the load bars.



Nantong Strongworld manufactures two models of Molded Grating: 50mm height, 38x100mm mesh, and 50mm height 38x100mm mesh, both in standard dimensions of 1220x2440mm.

Specification				
50mm High, 38x100mm Rectangular Mesh Molded Grating				
GRID SIZE	38			
GRID SIZE	8, 9/8, 9			
GRID SIZE	98			
GRID SIZE	8, 9/8, 9			
GRID SIZE	28			
GRID SIZE	100			
Open Area	80%			
Approx. Weight (kg/m²)	15.0			

The Mesh: 50mm high, 38x100mm mesh molded grating is engineered to be lighter than metal, molded and pultruded grating. Featuring over 77% open area, this type of mesh meets a number of safety and operational considerations by providing for high volume ventilation and airflow, increased visibility, and light penetration. The large open area combined with its unique construction also allow for thorough cleaning. Because cross bars used in it don't extend to the full depth of the grating, they provide less of an obstruction to the flow of cleaning solution. The strength and stiffness allows it to be installed over greater spans, reducing the requirement for costly support structures.

The advantages include:

Competitive with maintenance-intensive metal and aluminum gratings

Lighter than metal, molded and pultruded gratings

One piece construction and high resin to glass ratio provides superior corrosion resistance

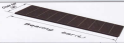
Large open area for air flow and light penetration

Outstanding clean ability due to half-height cross bars design

Exceptional strength and stiffness due to glass placement

Easy, cost-efficient installation

Long, maintenance free life

Specification				
30mm High, 25x100mm Rectangular Mesh Moltruded				
GRID SIZE	40		SS304 1220x2500	
GRID SET	15, 21/5, 2			
GRID SET	25			
GRID SET	5, 21/5, 2			
GRID SET	15			
GRID SET	100			
Open Area	88%			
Minimum Load Span	2.1			

The Mesh: 30mm high, 25x100mm mesh Moltruded moltruded grating features one-piece unitized construction, an engineered "T" shape load bars design for added strength. This advanced design allows it to span even longer distance and carry greater loads. In fact, its load and deflection capabilities are comparable to pultruded grating. The grating employs less open area, still provides good ventilation and visibility. Yet with its large aggressive surface area, provides an unmatched level of safety and slip resistance. And with no greater than 13mm spacing between load bars, the grating offers added benefit of being ADA and OGA compliant.

The advantages include:

Superior strength achieves pultruded grating stiffness

Longer spans meet fewer costly support members

Priced competitively with pultruded and aluminum grating

Corrosion resistance from one piece construction and high resin to glass ratio

Large aggressive surface area provides sure footing

Easy to clean, with half height cross bars

Easy, cost-effective installation

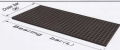




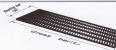
Category VII, StrongGrate™ Customized Gratings

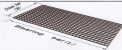
Strongworld has the capacity to offer molded grating configurations design/manufacture to meet your unique application. Strongworld's custom services include special molded grating configuration as well as custom hand lay-Up(HLU) products for industrial and architectural applications designed to meet your specific performance requirements.

Item	Height mm	Mesh mm	Bearing Bar Thickness, Top/Bottom mm	Standard Dimension mm	Approx. Wt. kg/m ²	Open Area
1	20	50x50	6.3/6.3	1250x2500	15.2	75%
2	20	75x75	6.3/6.3	1250x2500	8.7	80%
3	20	25x100	6.3/6.3	1250x2500	21.3	80%
4	20	25x150	6.3/6.3	1250x2500	15.2	80%
5	20	50x100	6.3/6.3	1250x2500	15.2	80%
6	40	50x50	6.3/6.3	1250x2500	30.4	80%
7	100	50x100	10.0/8.0	1250x2500	30	75%

Specification			Standard panel size 1250x2500mm 1250x3000mm
40mm High, 50x50mm Square Mesh			
Bearing Bar Width, Top	20		
Bearing Bar Width, Bottom	6.3/6.3		
Bearing Bar Spacing	50		
Open Area	6.3/6.3		
Open Area (Square)	50		
Open Area	75%		
Approx. Weight (kg/m²)	28.4		

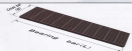


Specification				
38mm High, 25x100mm Rectangular Mesh				
Bar Size	40		Standard panel size	VWGL
Bar Spacing	50/100			1220x2440
Bar Size	38			
Bar Spacing	50/100			
Bar Spacing	100			
Open Area	88%			
Approx. Weight kg/m ²	22.5			

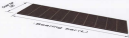
Specification			
25mm High, 75x75mm Square Mesh			
Bar Size	19		VWGL
Bar Spacing	75		
Bar Spacing	50/100		
Bar Spacing	75		
Bar Spacing	50/100		
Bar Spacing	75		
Open Area	88%		
Approx. Weight kg/m ²	9.7		1220x2440



Specification				
12mm High, 12x16mm Rectangular Mesh				
Exterior Size (mm)	27		Standard panel size	WVL
Exterior Size (mm)	6, 6/6, 6			
Exterior Size (mm)	26			
Exterior Size (mm)	6, 6/6, 6			
Exterior Size (mm)	100			
Open Area	90%		Standard panel size	1200x3000
Approx. Weight (kg/m²)	15.0			

Specification			
12mm High, 12x100mm Rectangular Mesh			
Exterior Size (mm)	27		Standard panel size
Exterior Size (mm)	6, 6/6, 6		
Exterior Size (mm)	26		
Exterior Size (mm)	7, 6/6, 6		
Exterior Size (mm)	100		
Open Area	90%		Standard panel size
Approx. Weight (kg/m²)	15.0		



Specification			
60mm High, 60x220mm Rectangular Mesh			
Standard JIS	17		
Standard EN	10, 12, 14, 16		
Standard JIS	100		
Standard EN	10, 12, 14, 16		
Standard JIS	1000		
Open Area	80%	Product Code: 1000	WALL
Maximum Weight	10, 12		1700x2200

Specification			
100mm High, 100x100mm Rectangular Mesh			
Standard JIS	17		
Standard EN	10, 12, 14, 16		
Standard JIS	100		WALL
Standard EN	10, 12, 14, 16		1700x2200
Standard JIS	1000		
Open Area	80%		
Maximum Weight	100, 12		





Typical StrongGrate™ Molded Fiberglass Grating Load/Deflection Tables

	380mm	450mm	500mm	750mm	900mm	1000mm	1130mm
25mm High, 38x38mm Square Mesh	882	882	211	200	182	133	92
25mm High, 15x15mm Mini Mesh	974	474	334	211	188	133	92
25mm High, 100x25mm Rectangular Mesh Heavy Duty	754	882	374	293	182	133	114
25mm High, 38x38mm Square Mesh	882	202	402	30	200	174	134
38mm High, 38x38mm Mini Mesh	954	582	442	211	212	182	142
38mm High, 13x13mm Mini Mesh	1072	882	502	293	200	204	182
50mm High, 38x38mm Square Mesh	1452	1382	752	502	488	312	272
50mm High, 13x13mm Mini Mesh	1602	1372	782	502	488	302	272
40mm High, 50x50mm Square Mesh	882	572	402	300	282	182	158
50mm High, 50x50mm Square Mesh	1488	1882	1188	882	888	482	204
88mm High, 38x38mm Square Mesh Heavy Duty	572	4084	2088	2012	1442	1142	802
25mm High, 38x38mm Square Mesh with 3mm Cover	738	528	382	278	282	182	188
38mm High, 38x38mm Square Mesh with 3mm Cover	838	824	482	298	284	282	252
50mm High, 38x38mm Square Mesh with 3mm Cover	1084	1128	632	682	682	384	312
88mm High, 38x38mm Square Mesh with 3mm Cover	1628	1878	1188	1088	888	884	882

Concentrated Load



	380mm	450mm	500mm	750mm	900mm	1000mm	1130mm
25mm High, 38x38mm Square Mesh	952	882	712	382	382	382	382
25mm High, 15x15mm Mini Mesh	1088	882	682	442	382	382	712
25mm High, 100x25mm Rectangular Mesh Heavy Duty	942	712	512	382	412	382	712
38mm High, 38x38mm Square Mesh	1188	884	1482	682	682	382	382
38mm High, 15x15mm Mini Mesh	1384	882	1472	682	682	382	382
50mm High, 13x13mm Mini Mesh	1588	884	1582	1472	782	682	682
38mm High, 38x38mm Square Mesh	1372	878	1072	1484	682	682	682
38mm High, 15x15mm Mini Mesh	1642	1182	1082	1472	682	682	682
40mm High, 50x50mm Square Mesh	1812	1082	1182	682	1482	482	682
50mm High, 50x50mm Square Mesh	1882	1388	1882	1472	1182	1182	682
40mm High, 38x38mm Square Mesh Heavy Duty	11882	1882	1882	882	1882	1882	1882
25mm High, 38x38mm Square Mesh with 3mm Cover	1172	1082	1082	482	1082	382	172
38mm High, 38x38mm Square Mesh with 3mm Cover	1182	1084	1172	682	482	482	182
50mm High, 38x38mm Square Mesh with 3mm Cover	1282	1082	1082	682	682	682	482
88mm High, 38x38mm Square Mesh with 3mm Cover	1372	1372	1174	1072	1182	1182	682

Uniform Load



Notes:

1. The loads were calculated at a Deflection of L/125. The deflection L/125 equates to 0.70% deflection of the span width. Deflection=L/125; L= span width. The custom designed application is to be tested individually.
2. The load data provided here are for general information only, as actual environment and operational conditions are beyond our control. For these reasons, Haining Strongworld FRP Products Co., Ltd. cannot guarantee that actual performance will correspond to the load tables provided here.

StrongGrate™ Chemical Resistance Guidance

[illegible]



Installation Accessories

Installation- whenever possible, provide for a minimum of 40mm of bearing support at all grating support points. Holddown clips should be used at the rate of one clip for every 0.6m² of grating minimum, or at least 4 clips for any square or rectangular piece, or at least 3 for triangle piece.

M Clips

M clips or saddle clips clamp two fiberglass grating load bars to the support. This provides excellent holding capability and because of this, are recommended for stair treads and most molded fiberglass gratings (square mesh, rectangular mesh and mini mesh).



G Clips

When drilling the support member has to be avoided, G clips offer the solution. The lower jaw of the clip grips the support flange when the bolt is torqued. A heavier top clip then completes the assembly to carry the loads. Providing excellent bi-directional holding capability for square mesh grating.



W Clips

This 40mm diameter fastener is used for holding down plates and covered fiberglass gratings. The W clip's recessed center allows the fastener to sit flush with the ADA compliant (<6.4 mm high) hold down clip.



G Clips

G clips were specifically designed to tie two panels of molded fiberglass gratings together to minimize differential deflections when their joints fall between supports. G clips are also used in fiberglass grating lag systems for panel abutments. Lower nut is welded to clip so installation is from top side of fiberglass grating floor.



L clips

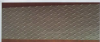
This lighter duty clip should be specified to hold one load bar to the support for lighter duty loads. It is available for molded and protruded fiberglass gratings.



StrongPlate™ & StronGrate™ Covered Grating/StronGrate™ Sandwich Grating

Many applications require a solid flooring for a variety of reasons, such as odor control in a waste-water plant or in an offshore drilling mud room, or possibly for safety reasons to prevent any small objects from falling through the flooring to the level below. For these instances, Strongworld has two solutions: StrongPlate™ structural plate and StronGrate™ covered grating.

StrongPlate™ structural plates are offered in thicknesses ranging from 9mm to 25mm, and three choices of plate surfaces are available: Checkered-top finish, gritted-top finish, or smooth top finish. Thicker plates can be custom-ordered.



Checkered-Top Finish



Gritted-Top Finish



Smooth-Top Finish

StrongPlate™ is offered in all of the same resin systems as StronGrate™ molded grating products and provide the same corrosion resistance features of StronGrate™ products.

For covered grating applications, 3mm or 6mm StrongPlate™ is laminated to StronGrate™ molded and pultruded gratings to form a solid and corrosion resistant working surface. However, customed thicker plates can be incorporated. These materials are used for applications where free passage of light, fluids, odors or air is no desired for drainage a requirement, as in a pit covers where reduction of corrosive vapors is needed. Heavy duty covered gratings are recommended for areas exposed to turning wheel traffic.



The StronGrate™ covered grating can be produced also in a "Sandwich" version (glass layers on both sides), increasing the mechanical resistance properties.





StrongTread™ and StronGrate™ FabTread

Mentong Strongworld's molded fiberglass stair treads are offered in three varieties: the two types of StrongTread™ and one type of StronGrate™ FabTread.

Item	Height mm	Mesh mm	Bearing Bar Thickness Top/Bottom mm	Standard Dimension mm	Approx. Wt. Kg/m ²	Open Area
1	38	25x152	1.0/3.8	583x2050	23.1	82%
2	38	38x152	1.0/3.8	583x2050	17	88%
3	38	38x38	1.0/3.8	Customized Size With Railing	20.5	88%



StrongTread™ stair treads are cut either from StrongTread™ panels measuring from 565x3650mm or 565x3660mm. The mesh of the StrongTread™ is 38x152mm or 38x153mm with double bearing bars at the 152mm intervals so that any stair tread with a length that is a multiple of 152mm is always banded. The StrongTread™ panel design results in an efficient utilization ratio, i.e. 6 banded stair treads 0.762mm long can be cut from the StrongTread™ panel with zero drop. The StrongTread™ panel comes with either a maroon top non-skid or a gridded top non-skid.

The OSHA (Occupational Safety and Health Administration) required non-skid nosing, built in to the leading edge of the tread for the first 32mm, is always gridded, and has the contrast color with the rest of the panel, normally in black.



The StrongTread™ FabTread is a regular 38mm thick, 38x38mm square mesh grating with a fabricated structural nosing.





Field Fabrication and Installation of StronGrate™ Molded Fiberglass Grating

Safety Precautions- When cutting StronGrate™, always wear safety glasses or goggles to protect your eye and always wear a dust mask to reduce dust inhalation. Always wear gloves, and it is recommended that a shop coat with neck and tapered sleeves be worn to prevent skin irritation. Work in well-ventilated and ventilated areas. Always read the MSDS(Material Safety Data Sheet) before cutting and sealing StronGrate™ molded grating. Always provide firm support of the grating panels to prevent shifting, and the use of sawhorses and other supports will help to prevent common back injuries. Cutting of StronGrate™ grating will produce dust—this dust is non-carcinogenic but may cause some skin irritation.

Cutting StronGrate™-Depending on the amount (Linear meter)of grating to be cut, and the type of cutting required, i.e., straight cuts or circular cuts, a variety of field and shop tools can be used such as an abrasive coated metal blade, or a standard bimetal blade or a hacksaw with a blade with a similar tooth pattern as the bimetal blade.

For making straight cuts, the following equipment is recommended:

Panel saw

Circular saw

Table saw

Radial arm saw

Reciprocating saw

Hand-held hack saw(for small quantities or emergencies)

Note: The blade should be an abrasive continuous rim cut-off blade normally used on masonry or ceramic products or diamond coated blades.

For making small radius circular cuts, and reciprocating saw with the same blade specifications above is recommended. For making larger radius circular cuts, a circular saw can be used using the blade specifications state above.

Remember that the saw blades will "eat-up" about 3mm of grating with each cut, so be sure to allow for this when measuring and laying out your marks on the grating panels.

Always use sandpaper or a sanding wheel to smooth out all cut edges before sealing; all cut edges must be sealed ALL . For this, use Strongworld vinyl ester resin to effectively seal cut surfaces of fiberglass products and protect the fiberglass fibers from environmental attack.





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