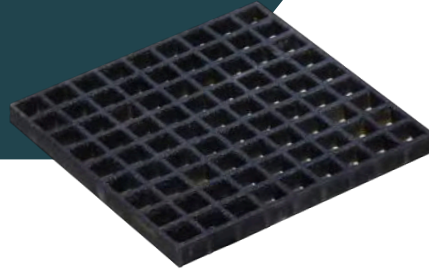


MOLDED FRP GRATING

Thermoset plastic resin gratings reinforced with glass fiber rovings



ADVANTAGES OF FRP

- High corrosion and chemical resistance
- High strength to weight ratio
- Long life cycle
- Non-conductive - electric and thermal
- Fire retardant
- EMI/RFI Transparent
- Good aesthetics
- Lower environmental impact
- UV stable

ARCHATRAK FRP OPTIONS

MacroMesh

FRP-38-38-25-DG



MidiMesh

FRP-38-19-30-DG



MiniMesh

FRP-38-12-30-DG



Resin Isophthalic Polyester - flame retardant and UV resistant
Color Traffic Grey (RAL 7043) - more RAL options on request
Surface Concave, Bare Foot, Gritted
Size of Panels 48" x 96"

FRP MOLDING PROCESS

FRP gratings are produced by wet molding and hot curing in a heated mold.

Continuous fiberglass rovings laid in alternating layers are used for reinforcement, so loads are distributed evenly in all directions.

Glass content is approximately 35%.

COMMON FRP RESINS

Isophthalic Polyester Resin

Archatrak's standard and the most popular resin system for more demanding industrial, marine and boardwalk applications. Provides long-lasting performance in areas where corrosion is a concern.

Vinyl Ester Resin

Provides the highest chemical resistance and typically used in environments where FRP products are subject to frequent and direct contact with the harshest of chemicals.

Phenolic Resin

Used where fire resistance, low flame spread index, smoke suppression and low toxic fumes are critical. Typically used in offshore applications and confined spaces.

Polyester Resin

Typically used in commercial or light industrial applications, especially where moisture is prevalent.

Product Code	Height	Grid Size (On Center)	Rib Thickness 1	Rib Thickness 2	Aperture	Open Area (%)	Weight	Panel Size
FRP-38-38-25-DG	1"	1 1/2" x 1 1/2"	1/4"	N/A	1 1/4" x 1 1/4"	68	2.5 psf	48" X 96"
FRP-38-19-30-DG	1 1/4"	3/4" x 3/4"	1/4"	1/4"	1/2" x 1/2"	42	3.5 psf	48" x 96"
FRP-38-12-30-DG	1 1/4"	1/2" x 1/2"	1/4"	3/16"	1/4" x 1/4"	30	4.5 psf	48" X 96"

LOAD DEFLECTION TABLES

FRP - 38-38-25-DG

Primary Grid Bars	1½" x 1½" (on center)
Aperture	1¼"
Thickness	1"

Concentrated Line Load (SPAN and DEFL in mm)

SPAN	DEFL	kg/m					Break Point (kg)	
		75	150	300	450	600		750
450		0.6	1.1	2.1	3.1	4.2	4.8	3910
600		0.9	1.7	3.5	5.2	6.7	8.2	2920
900		2.9	5.9	12.1	18.5			1950
1200		5.7	11.6					1460

Uniform Load (SPAN and DEFL in mm)

SPAN	DEFL	kg/m²					
		240	480	980	1450	2450	3650
450		0.7	1.1	1.9	2.8	4.5	6.6
600		1.1	2.1	4.1	6.1	10.2	15.3
700		1.7	5.4	10.8	16.3		
900		5.7	11.1	21.7			

Concentrated Full Panel Load (SPAN and DEFL in mm)

SPAN	DEFL	kg				
		150	370	1120	1500	2200
450		0.3	0.7	2.1	2.7	4.2
600		0.7	1.7	4.6	6.1	9.1
900		1.8	4.4	13.1		
1200		2.9	7.5			

FRP - 38-19-30-DG

Primary Grid Bars	1½" x 1½" (on center)
Secondary Grid Bars	¾" x ¾" (on center)
Aperture	¾"
Thickness	1¼"

Concentrated Line Load (SPAN and DEFL in mm)

SPAN	DEFL	kg/m					Break Point (kg)
		75	150	300	450	750	
450		0.3	0.5	1.0	1.5	2.5	4830
600		0.5	1.3	2.3	3.6	5.8	4110
750		1.3	2.5	4.8	7.4	12.4	3170
900		1.8	3.8	7.6	11.4		2640

Uniform Load (SPAN and DEFL in mm)

SPAN	DEFL	kg/m²					
		350	500	750	1000	1500	2500
450		0.3	0.5	0.8	1.0	1.5	2.3
600		1.0	1.5	2.3	2.8	4.3	7.4
700		2.5	3.8	5.8	7.6	11.7	
900		4.6	7.1	10.7			

Concentrated Full Panel Load (SPAN and DEFL in mm)

SPAN	DEFL	kg				
		25	45	100	150	250
600		< 0.3	0.3	0.8	1.0	1.8
750		0.3	0.8	1.3	2.0	3.3
900		0.5	0.8	1.8	2.6	4.1
1050		0.8	1.5	2.8	4.3	7.1
1200		1.1	1.8	3.8	5.6	9.4

FRP GRATING GUIDELINES

1. The max. recommended load for any given span should not be exceeded. Max. recommended load represents a 5:1 factor of safety on ultimate capacity.
2. Ultimate capacity represents complete and total failure of the grating.
3. Walking loads, typically 50-60 lb/sq.ft maximum are recommended for pedestrian traffic. Max. deflection for pedestrian comfort is typically the lesser of 3/8" or clear span divided by 125. For a firmer feel, deflection should be limited to the lesser of 1/4" or clear span divided by 200.
4. The allowable loads in the previous tables are for static load conditions at ambient temperatures only. Allowable loads for impact or dynamic conditions should be a maximum of one-half the values shown. Long term loads will result in added deflection due to creep in the material and will also require higher safety factors to ensure acceptable performance.

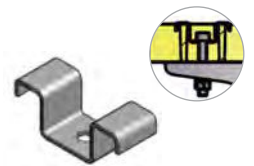
Comparing FRP With Other Materials

Variables	Archatrak FRP	Steel	Aluminum	Timber
Corrosion Resistance	High	Low	Medium	Low
Strength	High	High	High	Low
Weight	Low	High	Low	Medium
Electrical Conductivity	Low	High	High	Moderate
Thermal Conductivity	Very Low	High	High	Low
MI/RFI Transparency	Yes	No	No	Yes
Fabrication	Easy	Easy	Moderate	Easy
Life Cycle Cost	Low	Moderate	Moderate	High
Environmental Impact	Low	High	High	Low

ACCESSORIES

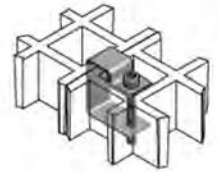
M Clip

For fixing molded grating to support structures



C Clamp

For joining two molded grating panels



SURFACE FINISH OPTIONS

Concave Finish

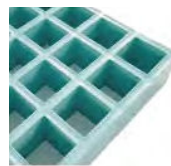
- Default post-production finish
- Ideal where a degree of slip resistance is required for wet conditions, but a gritted surface may be too harsh (e.g. beach access boardwalks)

Bare Foot Finish

- The quartz post-production finish is sanded to a smooth, flat surface and coated with resin.
- Best for architectural applications where a flat and regular surface appearance is desired.

Gritted Finish

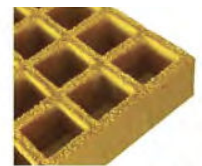
- Standard finish of Archatrak supplied grating
- Quartz grit is bonded to the top surface of the grid
- Exceptionally safe, hard-wearing walking surface
- Excellent slip resistance in wet, oily and icy conditions.



Concave



Bare Foot



Gritted