



FRP GRATING

Molded & Pultruded fiberglass
grating for corrosive, heavy-duty and
electrical-isolation environments.

ONE CATALOG · FOUR STANDARDS

FRP



What is FRP Grating?

Glass-fiber strength bonded in a corrosion-proof resin, molded into an open grid. Lighter than steel, immune to rust, electrically safe — zero coatings, zero maintenance.

1/4

WEIGHT OF STEEL

0

RUST & CORROSION

0

COATINGS NEEDED

SAFE

ELECTRICALLY INSULATED

TYPICAL FRP DENSITY 1.8 G/CM³ · ABOUT ¼ THE WEIGHT OF STEEL

FRP vs Steel

PROPERTY	FRP GRATING	STEEL GRATING
Weight	¼ of steel · 1.8 g/cm ³	Heavy · 8–12 lb/ft ²
Corrosion	Never rusts	Rusts — needs coating
Electrical	Non-conductive	Conductive
Maintenance	Zero — no coatings	Recoat regularly
Installation	1-person handling	2–3 persons
Slip safety	Molded anti-slip surface	Plain — needs serration

Master Selection Guide

STEP 01

PROCESS

Molded — bidirectional, cut freely

Pultruded — long spans, heavy load

STEP 02

RESIN

GP — dry indoor

IFR — general outdoor

VE — chemical / marine

Phenolic — fire-critical

STEP 03

SURFACE

Meniscus — dry, light load

Grit — wet, oily, heavy

A-O sand — vehicle traffic

Molded vs Pultruded

MOLDED

BIDIRECTIONAL

Structure — Fibers interwoven, single-press molded

Load — Bidirectional, X/Y equal strength

Span — Short-medium · 0.9–1.2 m (3–4 ft)

Open area — High · 56–82% square mesh

Cutting — Any direction, no strength loss

PULTRUDED

UNIDIRECTIONAL

Structure — Continuous I-bars + cross rods

Load — Unidirectional, strong axis

Span — Long · 1.8–3 m (6–10 ft)

Open area — Low · 20–70% rectangular

Cutting — Along bars; cross-cut needs care

TYPICAL SPAN @ 4.79 kN/m² · DEFLECTION ≤ 6.35 MM

MOLDED  1.37 M

PULTRUDED  2.40 M

Molded Grating

Continuous glass fibers interwoven and bonded in resin under heat and pressure — a single-piece, bidirectional panel with equal strength in both directions and free cutting.

MESH 38×38 · 50×50 · 25×100 mm

THICKNESS 25 / 30 / 38 / 50 mm

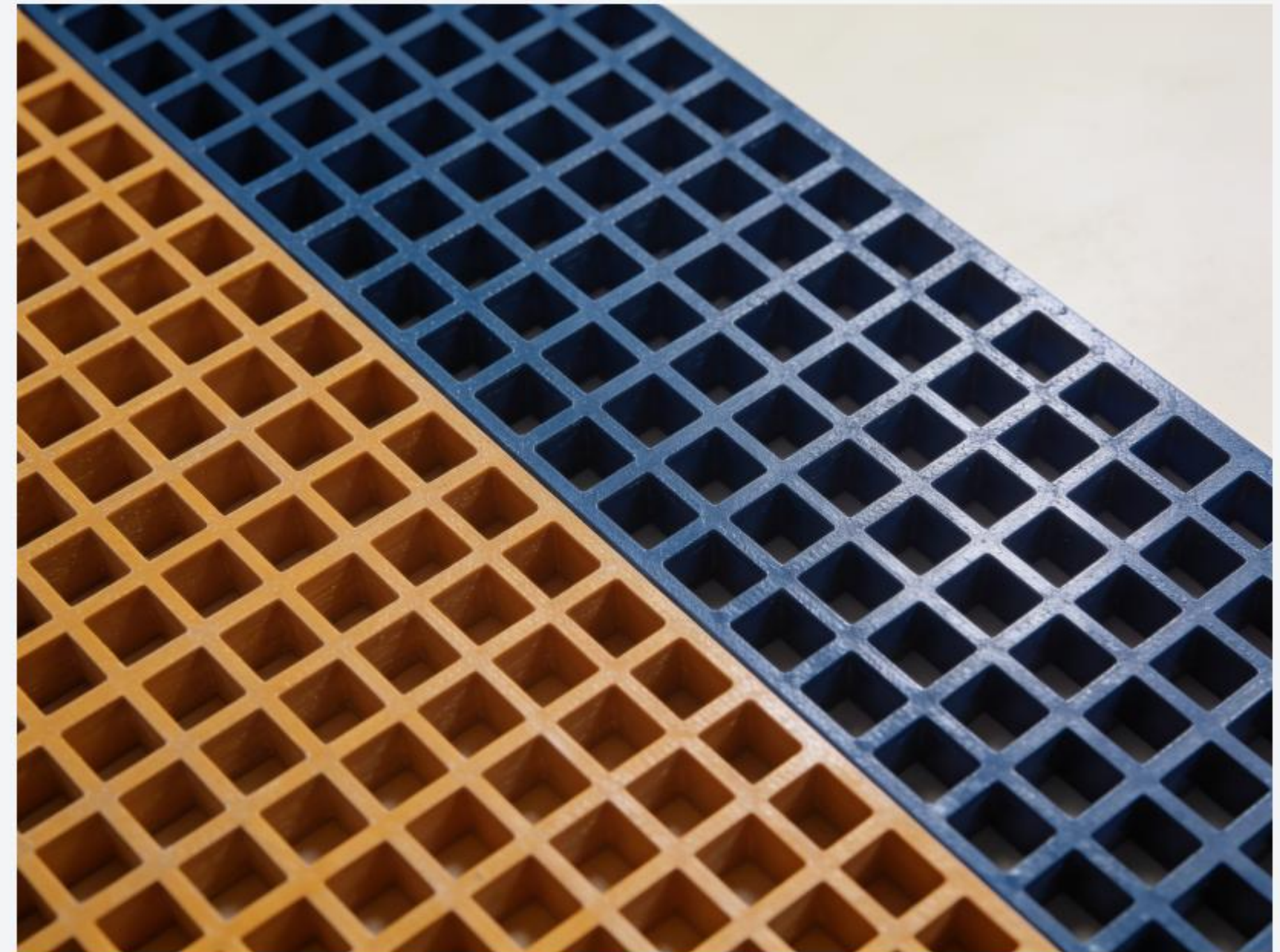
PANEL 1220 × 3660 mm (4' × 12')

OPEN AREA Up to 82%

SURFACE Meniscus · Grit · A-O sand

LOAD 2.87 kN/m² (60 psf) walkway

CONSTRUCTION — 35–40% GLASS · RESIN-RICH SURFACE · UV INHIBITOR · CONCAVE MENISCUS · DEPTH ±1.6 MM · FILLET 1.6 MM



Molded Grating — Specs

THICKNESS	MESH	OPEN AREA	WEIGHT · KG/M ²
25.4 mm (1")	50.8 × 50.8 square	72%	11.8
25.4 mm (1")	38.1 × 38.1 square	70%	12.7
25.4 mm (1")	25.4 × 101.6 rectangular	69%	13.7
25.4 mm (1")	19.05 × 101.6 rectangular	63%	14.2
38.1 mm (1.5")	38.1 × 38.1 square	70%	18.6
38.1 mm (1.5")	Mini Mesh 19.05 × 19.05	44%	22.0
38.1 mm (1.5")	25.4 × 50.8 rectangular HD	51%	29.5
50.8 mm (2")	50.8 × 50.8 square	72%	19.5

STANDARD PANEL 1.22 × 3.66 m (4' × 12') · ALSO 0.91–1.52 × 3.05–3.66 m · 38.1 MM 38×38 STRUCTURAL: A 6.03×10³ mm²/m · I 6.96×10⁵ mm⁴/m · S 3.49×10⁴ mm³/m

Maximum Span

MESH	25 MM	30 MM	38 MM	50 MM
25×25 mm	991	—	1143	—
38×38 mm	1067	1219	1372	1676
50×50 mm	991	—	1219	1524
25×100 mm	1219	—	1524	1829

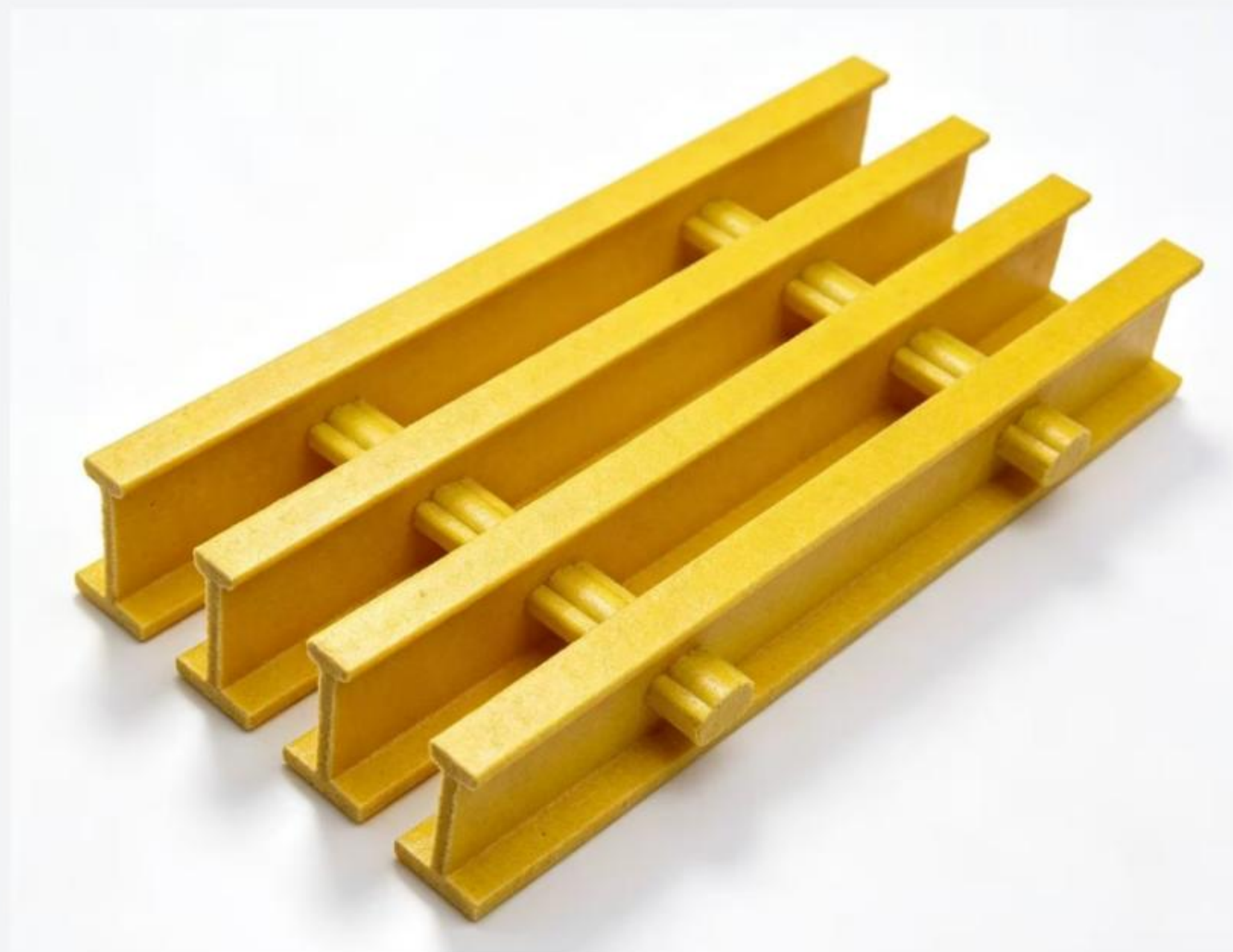
MAX SPAN (MM) @ 4.79 kN/m² · DEFLECTION ≤ 6.35 MM · SAFETY FACTOR 5:1

Pultruded Grating

Continuous pultruded I-bar bearing bars, mechanically locked with cross rods — unidirectional strength for the longest spans and heaviest loads with fewer supports.

SERIES	I-2000 ... I-7000
OPEN AREA	20% – 70%
BAR HEIGHT	25 / 32 / 38 mm
PANEL	1220 × 3660 mm (4' × 12')
LOAD	4.79 kN/m ² (100 psf)
SPAN	Up to 3 m (10 ft)

CONSTRUCTION — 3-PIECE CROSS-ROD · SYNTHETIC SURFACING VEIL ·
UV COATING OPTION · MAX PANEL 227 KG · 1.5 × 6 m



I-Bar Series — Full Range

SERIES	% OPEN	SPAN 25 MM	SPAN 32 MM	SPAN 38 MM	WT @38 · KG/M ²
I-2000	20%	1332	1485	1708	26.9
I-3000	30%	1288	1439	1652	23.9
I-4000	40%	1237	1382	1587	21.5
I-5000	50%	1182	1320	1516	17.6
I-6000	60%	1118	1241	1431	14.7
I-7000	70%	1034	1155	1332	11.2

SPAN (MM) @ 4.78 kN/m² · 6.35 MM DEFLECTION · 3-PIECE CROSS-ROD ASSEMBLY · T-BAR & HD (HEAVY DUTY) SERIES AVAILABLE

Span by Bar Height

SERIES	25 MM	32 MM	38 MM
I-2000	1332	1485	1708
I-4000	1237	1382	1587
I-6000	1118	1241	1431
I-7000	1034	1155	1332

MAX SPAN (MM) @ 4.79 kN/m² · DEFLECTION ≤ 6.35 MM · ALONG BEARING-BAR AXIS

Specialty Grating



Mini Mesh

FINE MESH

Mesh — 19 × 19 mm

Open area — ~44%

Thickness — 13 / 25 mm

Use — ADA · heel-safe



Covered

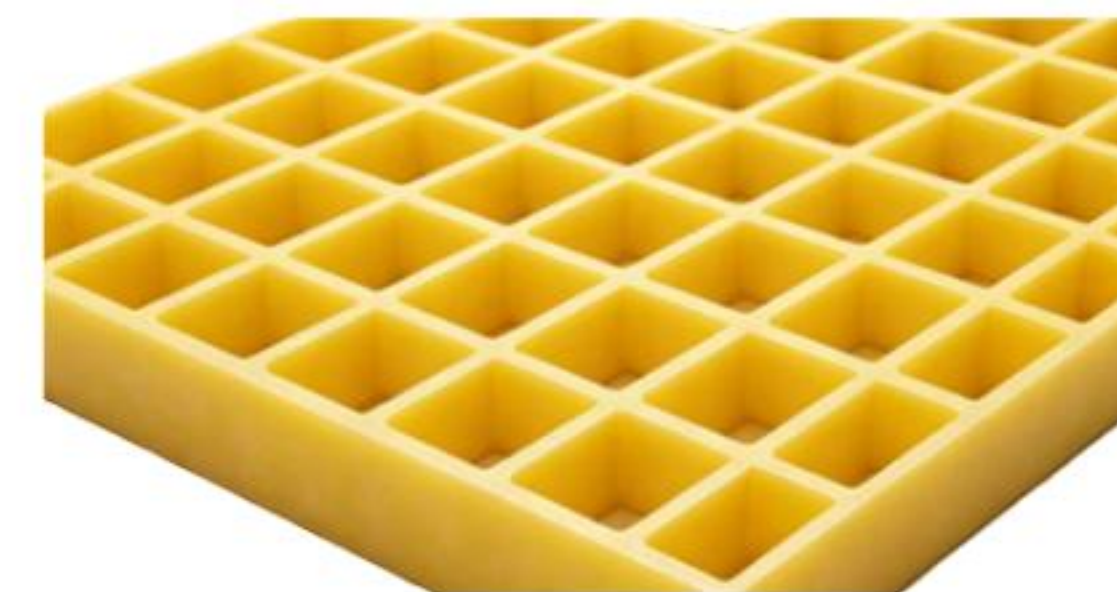
SOLID TOP

Top — solid / closed

Surface — grit option

Thickness — 25 / 38 mm

Use — debris · splash



High Load

HIGH LOAD CAPACITY

Load — forklift · vehicle

Safety factor — 2.5:1

Thickness — 38 / 50 mm

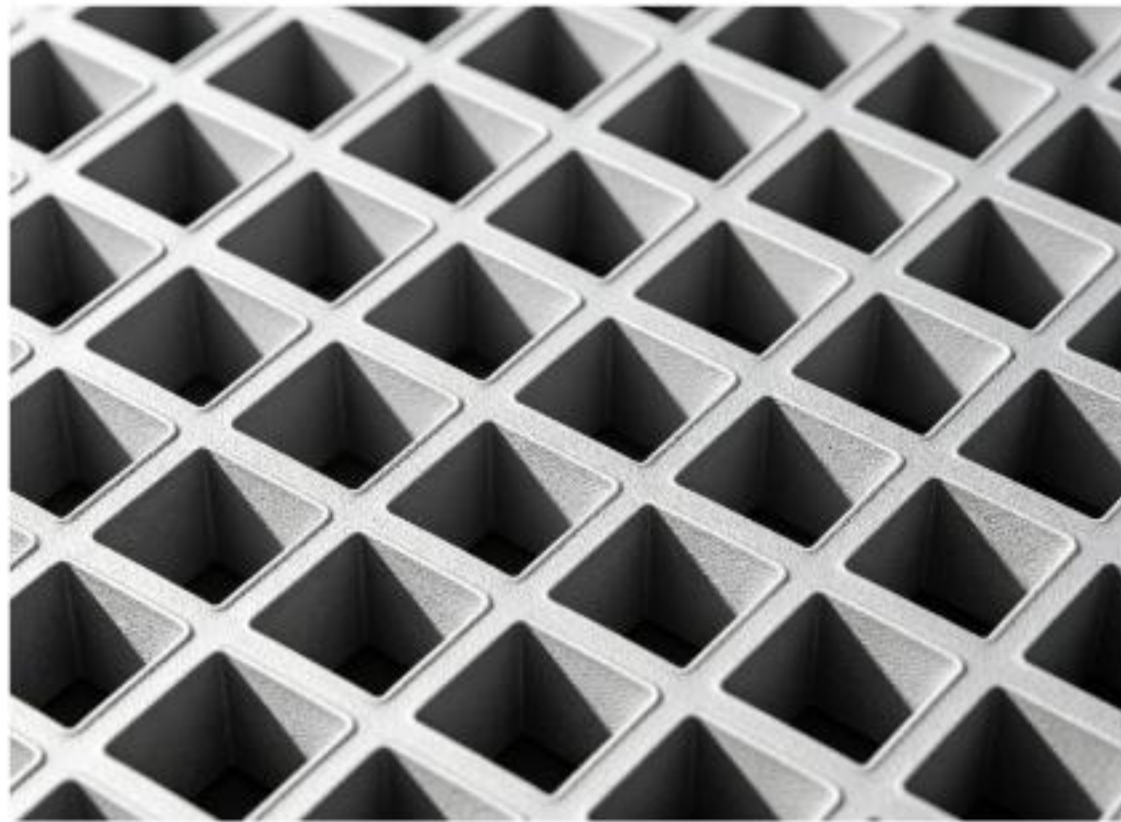
Use — loading bays

Surface Options

MENISCUS

CONCAVE TOP

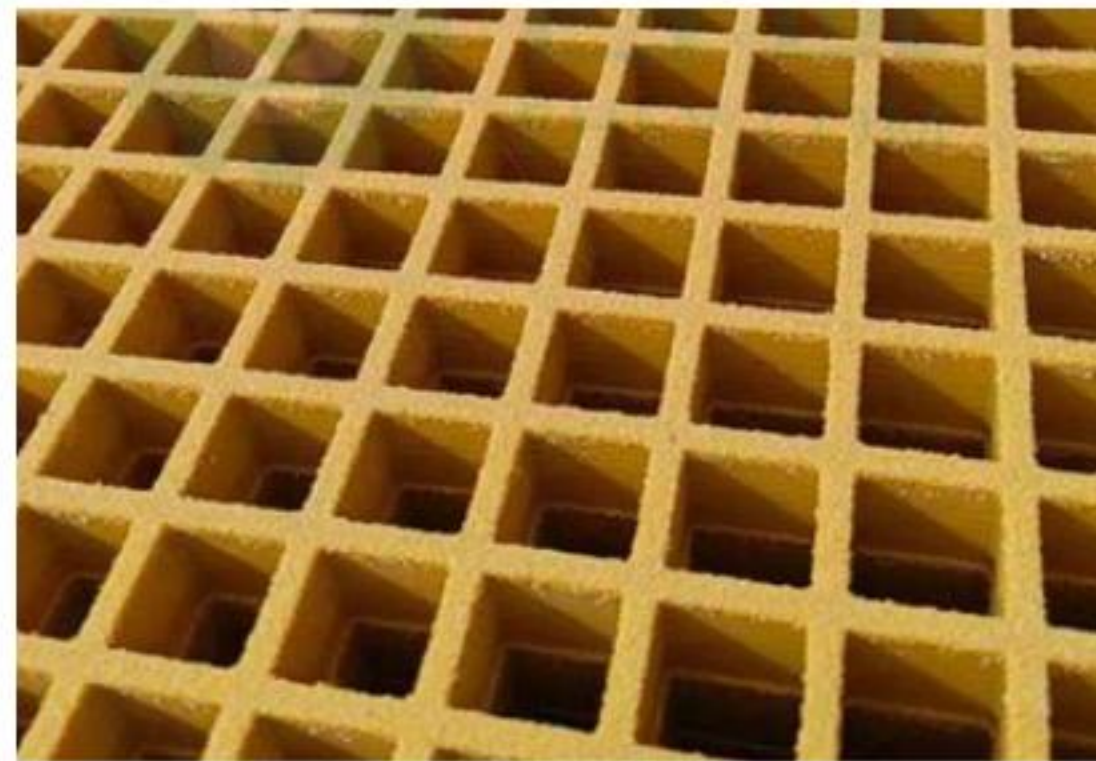
Concave top sheds water. Standard for dry walkways and light pedestrian loads.



GRIT

SILICA SAND

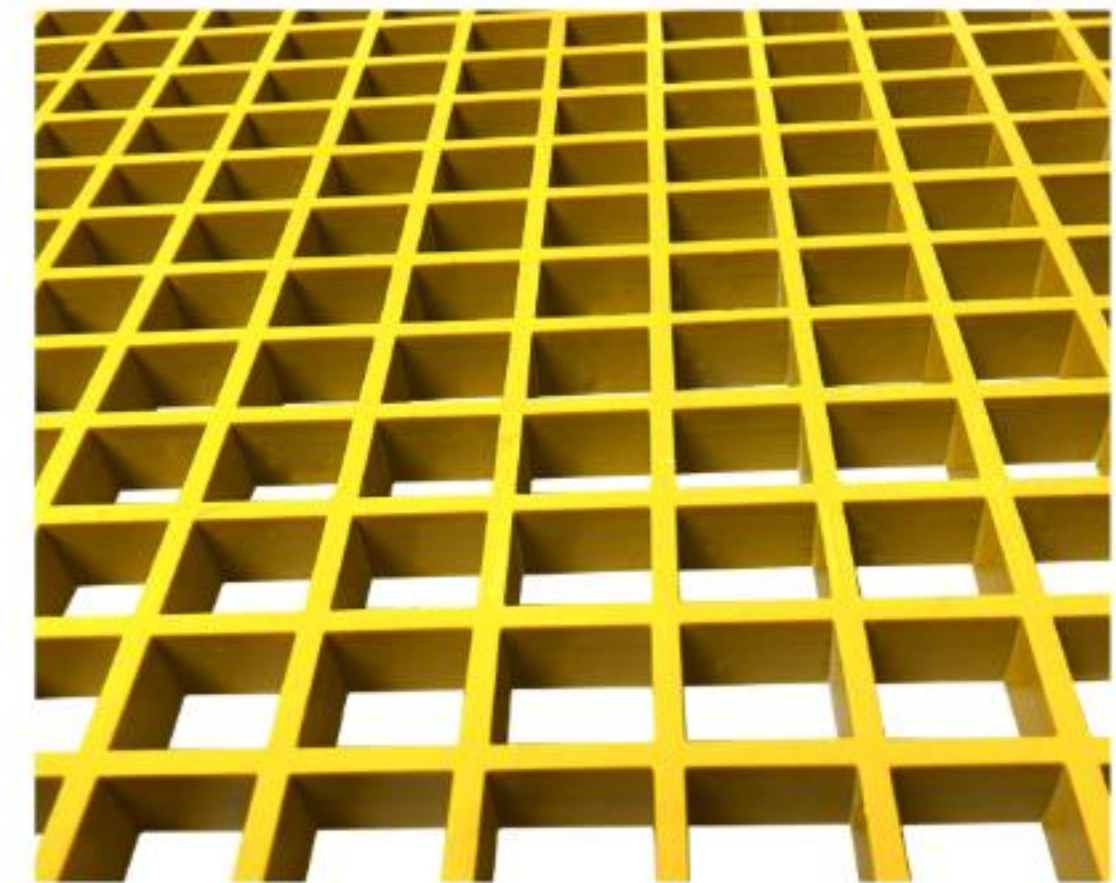
Silica sand embedded in the surface for a permanently non-slip, high-grip top in wet or oily areas.



DOUBLE-FLAT

SMOOTH SURFACE

Pollution-proof, antibacterial, no liquid retention.



Resin Selection

POLYESTER GP

CFR-25

≤25

ASTM E84 FSI

Corrosion — Medium

100°C · Dry indoor, no corrosion

ISOPHTHALIC

IFR-25

≤25

ASTM E84 FSI

Corrosion — Very good

105°C · Outdoor, wastewater

VINYL ESTER

VEFR-25

≤25

ASTM E84 FSI

Corrosion — Excellent

110°C · Strong acids, marine

PHENOLIC

MP-5

≤5

ASTM E84 FSI

Corrosion — Excellent

180°C · Fire-critical, low-smoke

ECONOMY → GENERAL-PURPOSE → CHEMICAL / MARINE → FIRE-CRITICAL

Fire Performance

RESIN	CODE	FSI · ASTM E84	CLASS
Phenolic	MP-5	≤5	Class 1 · low smoke
Vinyl Ester FR	VEFR-10	≤10	Class 1
Vinyl Ester	VEFR-25	≤25	Class 1
Isophthalic FR	IFR-25	≤25	Class 1
Orthophthalic	CFR-25	≤25	Class 1
ASTM E84 CLASS 1 · FSI ≤ 25 · SDI ≤ 450 · D635 HB · EN 13501-1 B-s1,d0 · AS 1530.3 / AS-NZS 3837 (AU) · BS 476 P.6/7 (SEA)			

Chemical Resistance

CHEMICAL	Vi-Corr VE	Corvex ISO	XFR FR
Sulfuric Acid 25%	C	S	S
Hydrochloric Acid 10%	C	S	C
Nitric Acid 20%	C	S	I
Acetic Acid 50%	C	C	I
Sodium Hydroxide 50%	C	I	N
Sodium Hypochlorite 10%	C	S	S
Benzene	I	I	I
Water · Fresh / Salt	C	C	C

C = CONTINUOUS · S = SPLASH / SPILL · I = INFREQUENT · N = NOT RECOMMENDED · RATINGS FOR MOLDED RESIN SYSTEMS

Load & Deflection

KEY LOADS — WALKWAY 2.87 kN/m² · STAIR 4.79 kN/m² · POINT 1.33 kN · MAX DEFLECTION ≤ 6.35 mm

MOLDED · 38.1 MM 38×38 SQUARE — UNIFORM LOAD · DEFLECTION (MM)

SPAN (M)	293	488	732	976	KG/M²
0.61 m (2')	0.51	0.76	1.27	1.78	
0.76 m (2.5')	1.27	2.03	3.05	4.06	
0.91 m (3')	2.29	3.81	5.84	—	
1.07 m (3.5')	4.57	7.87	—	—	

PULTRUDED · I-6000 38 MM — UNIFORM LOAD · DEFLECTION (MM)

SPAN (M)	293	488	732	976	KG/M²
0.61 m (2')	0.13	0.23	0.36	0.46	
0.91 m (3')	0.66	1.12	1.65	2.21	
1.22 m (4')	2.03	3.38	5.08	6.76	

DEFLECTION LIMIT ≤ 6.35 MM (1/4") FOR WALKWAY / STAIR · ≈ 60 / 100 / 150 / 200 PSF · EI MOLDED 0.07 · I-6000 0.93 ×10⁹ N-CM²/M

Four-Standard Compliance

PARAMETER	US	EN	AS	ISO	CATALOG VALUE
Guardrail height	1067 mm	≥ 1100 mm	900–1100 mm	≥ 1100 mm	1100 mm
Mid-rail opening	≤ 480 mm	≤ 500 mm	≤ 450 mm	≤ 500 mm	≤ 450 mm
Toe plate height	≥ 89 mm	≥ 100 mm	≥ 100 mm	≥ 100 mm	≥ 100 mm
Toe plate gap	≤ 6 mm	≤ 12 mm	≤ 10 mm	≤ 12 mm	≤ 10 mm

CATALOG VALUE = THE STRICTEST OF FOUR STANDARDS — BID-READY ACROSS GULF · SEA · NA · AU

Hold-Down Clips

CLIP	FUNCTION	GRATING	PART #
M-Clip	Hold-down to supports	Molded square mesh	710200
J-Clip	Hold-down · moderate loads	Molded square mesh	710180
G-Clip	Hold-down	Molded square mesh	710210
F-Clip	Hold-down	Molded square mesh	710190
C-Clip	Join unsupported edges	Molded	—
FC-Clip	Pultruded hold-down	I-bar / T-bar	710630
MI / MT	Pultruded hold-down	I-6000 / T-bar	710410
W-Clip	High-Load hold-down	HLC grating	710150

ALL TYPE 316 STAINLESS STEEL · SS316L FOR WET / CORROSIVE · SPACING ≤ 1.2 m · MIN 4 CLIPS PER PANEL

Installation

01

CUT

Molded — any direction.
Pultruded — along bearing
bars only.

02

SEAL

Seal cut edges with
compatible resin to restore
corrosion protection.

03

FIX

Hold down with SS316 clips
at ≤ 1.2 m spacing.

04

SUPPORT

Bearing support $\geq$ full panel
depth, spaced per span
tables.

USE CARBIDE / DIAMOND BLADES · VENTILATE WHEN CUTTING · WEAR PPE

Panel Sizes

PANEL · MM	PANEL · FT	THICKNESS	NOTE
1220 × 3660	4' × 12'	25 – 50 mm	Standard stock
1220 × 2440	4' × 8'	25 – 50 mm	Standard stock
1000 × 3000	3.3' × 9.8'	25 – 50 mm	Metric · Gulf / SEA
1500 × 4000	5' × 13'	38 – 50 mm	Gulf large projects

TOLERANCE ± 3 MM · CUT-TO-SIZE AVAILABLE · CUSTOM PANELS ON REQUEST

Where FRP Works

Wastewater Treatment

Corrosion-proof platforms, trench covers and walkways over clarifiers and channels.

Chemical Processing

Acid and alkali resistant grating for process areas, storage and containment.

Marine & Offshore

Saltwater and UV resistant decks, gangways and handrails for marine environments.

Infrastructure & Walkways

Pedestrian bridges, footpaths and ADA-compliant mini-mesh walkways.

Case Studies



Wastewater Treatment

Resin — Vinyl Ester (VE)

Surface — Grit anti-slip

Result — Zero coating · zero rust



Landscape Footbridge

Structure — Pultruded I-bar deck

Load — Pedestrian · 2.87 kN/m²

Result — ¼ steel weight · no maintenance



Industrial Platform

Type — High Load Capacity

Surface — A-O sand · vehicle

Result — 2.5:1 safety factor

Certifications

AS 1657

Access — platforms · walkways · stairs (AU)

AS 4586

Slip resistance R10–R13 (AU)

Aramco SAES

Gulf oil & gas owner spec

SABIC · ADNOC

Gulf petrochemical owner specs

BS 476 · ISO

Fire & access (ISO 14122) — SEA / UK

ASTM E84 · NSF 61

US fire & potable-water (global)

Ordering & Inquiry

To request a quote, specify the six items below — we will confirm span, load and compliance within 48 hours.

01 · PRODUCT	Molded / Pultruded / Mini / Covered / HLC
02 · MESH	38×38 · 25×100 · 19×19 mm
03 · THICKNESS	25 / 30 / 38 / 50 mm
04 · RESIN	GP / IFR / VE / Phenolic
05 · SURFACE	Meniscus / Grit / A-O sand
06 · PANEL	1220×3660 · 1000×3000 mm

SEND SPECIFICATIONS TO — INFO@WIBERGMETAL.COM · TEL/WHATSAPP +86 132 9058 8615 · +86 132 7317 7087

Profiles & Details



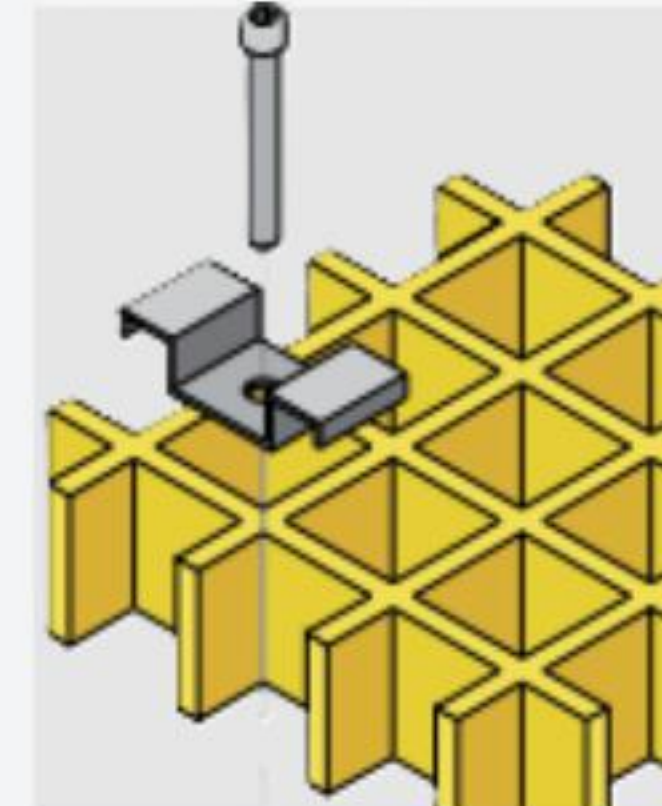
I-BAR SECTION · PULTRUDED



3-PIECE CROSS-ROD ASSEMBLY



T-BAR SECTION · PULTRUDED



M-CLIP HOLD-DOWN · 316SS

Regional Standards & Markets

SEA

Southeast Asia

STANDARDS

BS 4592 · BS 476 P.6/7 · ISO 14122

CLIMATE

High humidity · coastal salt spray

KEY DEMANDS

Corrosion-proof resin · metric panels
1000×3000 / 1220×3660 · competitive price

RESIN PICK

IFR / VE

GCC

Middle East · Gulf

STANDARDS

Aramco SAES · SABIC · ADNOC

CLIMATE

50°C+ heat · intense UV · sand

KEY DEMANDS

High HDT · low-smoke FSE resins · H₂S & chloride corrosion

RESIN PICK

VE / Phenolic (FSE)

AU

Australia

STANDARDS

AS 1657 · AS 4586 · AS/NZS 1170 · AS 1530.3

CLIMATE

High UV · coastal salt · bushfire zones

KEY DEMANDS

WHS compliance · slip R10–R13 · 2.5 kPa
UDL + 1.5 kN point

RESIN PICK

IFR / VE · Grit (R12) / A-O (R13)

Contact Us

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