

GRATING

STONGRATE
FIBREGLASS COMPOSITES



ABOUT STONCOR

StonCor companies are the platform operating entities for RPM Performance Coatings, which has its head office in New Jersey, USA. Our platform companies can be found in Africa, the Middle East, India and South America and represent the various brands within RPM.

We pride ourselves in manufacturing, specifying and supplying world class products for a wide variety of construction, repair and specialised rehabilitation projects.

We incorporate our knowledge and expertise with new innovation from our global network of technology partners, to lead in composite gratings and profiles, handrails, structural shapes, protective coatings, resin flooring, bridge expansion joints, roofing, sealants and concrete repair markets.

STONCOR Middle East

GRATING PRODUCTS

Stongrate provides turnkey design and fabrication of moulded gratings and fibreglass structures including platforms, cat ladders, stairways, railings and equipment support structures. Our professional engineering and drafting team can help you find the right solution to meet your needs for longevity, safety and cost.

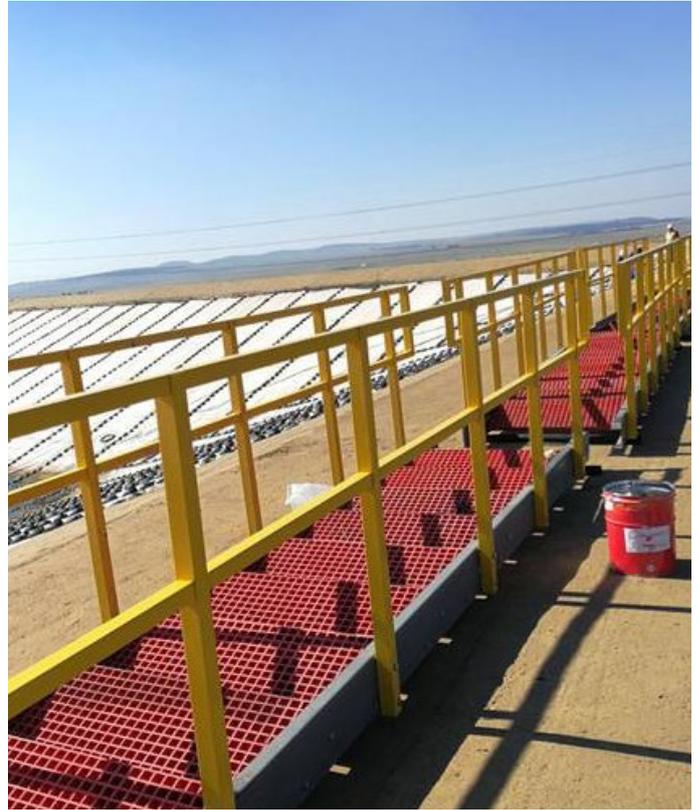


38mm GRP Grating and 44mm Square Tube Hand Railing

MOULDED GRATINGS

Stongrate Fibreglass Composites

Stongrate Fibreglass composites are manufactured in an open, heated mould system. Continuous E-glass roving's are placed in the mould in alternating layers and completely wetted out with resin. This continuous process produces an integral, one piece construction which provides excellent corrosion resistance as well as bi-directional strength. There are a number of different moulds available resulting in an extensive range of panel sizes, thickness and mesh patterns.

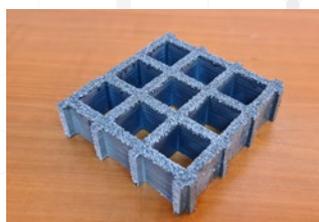


INDUSTRIES	FUNCTIONS	ADVANTAGES
+ Metals and minings	+ Anti-slip floor, stair tread, foot bridge	+ Fire Retardant
+ Construction engineering and transportation	+ Operation platform, trench cover	+ Corrosion resistant
+ Petrochemical engineering, water engineering and waster water	+ Security and safety fence, handrail	+ Slip Resistant
+ Food and beverage	+ Off-shore oil rig, moor shipyard, shipping deck and ceiling	+ High Strength to Weight Ratio
+ Oil and gas	+ Ramp ladder, scaffold and railway footpath	+ Long service life and maintenance free
	+ Decorative grid, and man-made fountain pool grid	+ Non-conductive and Non-magnetic
		+ Light weight for easy installation

Surfaces



CONCAVE/MINISCUS TOP



GRITTED TOP



GRITTED OR SMOOTH COVERED TOP

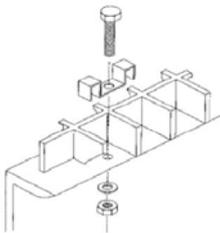
MATERIALS OF CONSTRUCTION

Resin Systems

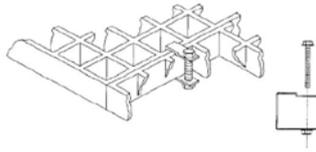
Resin Type	Resin Base	Description	Corrosion Resistance	Flame Spread Rating ASTM E84	Colours Available
IFR-25	Isophthalic Polyester Resin	Industrial grade corrosion resistance and fire retardant	Very good	25 or less	Green, Grey

Attachment Clip Assembly

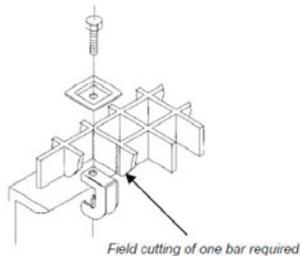
Stongrate offers/provides the specially designed joining and fastening clips required for the GRP Grating. All the attachments and clips are made from 316 Stainless Steel material and are available for the following grating thickness sizes: 25mm, 38mm & 50mm. A minimum of 4 clips are required per piece of grating.



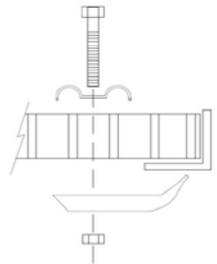
TYPE M
HOLD DOWN CLIPS



TYPE F
END PANEL CLIPS



TYPE G
HOLD DOWN CLIPS



TYPE J
HOLD DOWN CLIPS

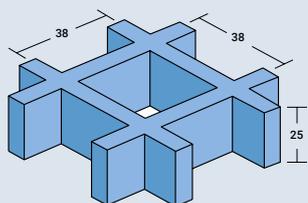


Fibreglass Moulded Grating Technical Details

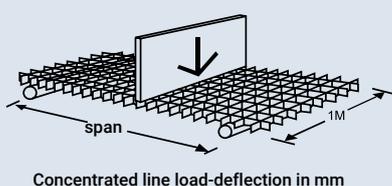
Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m ²)	Open Rate (%)
	25	6.5/5.0	38x38	1220 x 3660	12.3	68
	30	6.5/5.0	38x38	1220 x 3660	14.6	68
	38	7.0/5.0	38x38	1220 x 3660, 1220 x 2440, 915 x 3050	19.5	68

Legend	Thickness (mm)	Bar thickness (Top/Bottom)	Mesh size (mm)	Panel Size available (mm)	Weight (kg/m ²)	Open Rate (%)
	50	8.0/6.0	50x50	3660 x 1220	23.7	78
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-

Load Deflective Tables

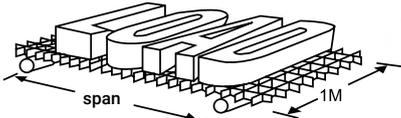


Bar thickness (Top /Bottom): 6.5/5.0
Distance between centers of bearing bars: 38
Open Area: 68%
Weight per square meter: 12.3 kg/m²
Standard panel sizes: 3660 x 1220



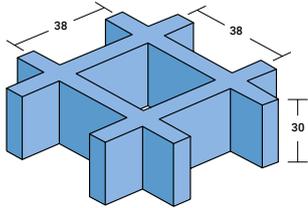
Concentrated line load-deflection in mm

38 x 38 x 25							
Deflection Span (mm)	Kg/m						Break Point (kg/m)
	75	150	300	450	600	750	
450	0.559	1.146	2.159	3.073	4.115	4.75	3910
600	1.16	2.32	4.64	6.97	9.29	11.62	2924
900	3.92	7.84	12.116	18.44	19.82	20.77	1948
1200	9.29	18.5	15.33	23.54	25.52	27.98	1461

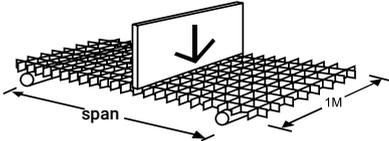


Uniformed load-deflection in mm

38 x 38 x 25							
Span (mm) \ Deflection	Kg/m						
	240	480	980	1450	2450	3650	4880
450	0.66	1.092	1.93	2.769	4.47	6.579	-
600	1.118	2.108	4.14	6.172	10.244	15.265	-
750	2.667	5.387	10.82	16.28	21.738	29.962	-
900	5.537	11.176	21.717	23.164	26.574	31.590	-

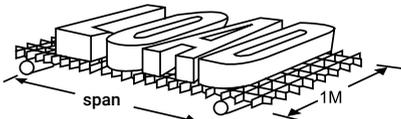


Bar thickness (Top /Bottom): 6.5/5.0
 Distance between centers of bearing bars: 38
 Open Area: 68%
 Weight per square meter: 14.6 kg/m²
 Standard panel sizes: 3660 x 1220



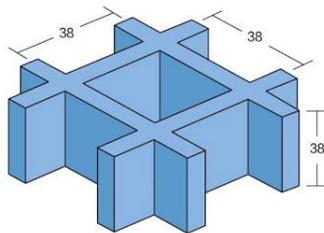
Concentrated line load-deflection in mm

38 x 38 x 30							
Span (mm) \ Deflection	Kg/m						Break Point (kg/m)
	75	150	300	450	750	1500	
300	<0.254	<0.254	0.254	0.508	0.762	1.524	9923.4
450	0.254	0.508	1.016	1.524	2.54	3.92	4827.6
600	0.508	1.27	2.286	3.556	5.842	7.38	4112.4
750	1.27	2.54	4.826	7.366	12.446	15.98	3173.7
900	2.27	4.54	9.08	13.63	18.72	22.05	2637.3

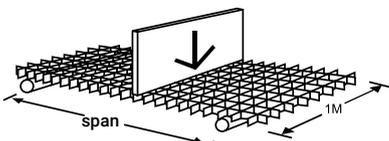


Uniformed load-deflection in mm

38 x 38 x 30						
Span (mm) \ Deflection	Kg/m					
	350	500	750	1000	1500	2500
300	0.29	0.48	0.57	0.75	1.15	1.82
450	0.78	1.19	1.81	2.47	3.54	4.95
600	0.76	2.66	4.28	5.56	8.41	13.19
750	3.48	5.12	8.21	10.95	16.42	-
900	5.89	8.81	14.15	18.92	-	-

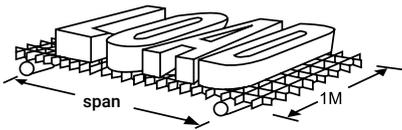


Bar thickness (Top /Bottom): 7.0/5.0
 Distance between centers of bearing bars: 38
 Open Area: 68%
 Weight per square meter: 19.5 kg/m²
 Standard panel sizes: 3660 x 1220, 2440 x 1220, 3050 x 915



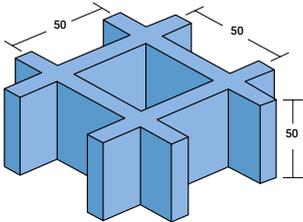
Concentrated line load-deflection in mm

38 x 38 x 38							
Span (mm) \ Deflection	Kg/m						Break Point (kg/m)
	150	300	450	600	750	1500	
300	0.356	0.483	0.61	0.762	0.889	1.06	17116
600	0.66	1.245	1.85	2.464	3.073	8.48	8718
900	1.803	3.683	5.563	7.417	9.296	13.79	5817
1200	4.749	9.677	14.63	19.583	21.19	-	3755

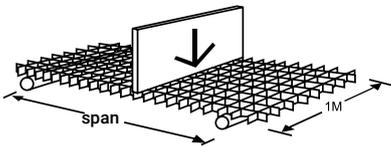


Uniformed load-deflection in mm

38 x 38 x 38							
Deflection Span (mm)	Kg/m						
	240	480	980	1450	2450	3650	4880
300	0.09	0.19	0.38	0.49	0.78	1.05	-
600	0.432	0.813	1.549	2.311	3.8354	5.74	-
900	1.702	3.454	6.959	10.465	17.475	23.25	-
1200	5.969	12.167	24.511	32.58	38.65	-	-

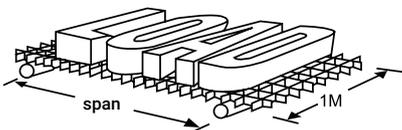


Bar thickness (Top /Bottom): 8.0/6.0
 Distance between centers of bearing bars: 50
 Open Area: 78%
 Weight per square meter: 23.7 kg/m²
 Standard panel sizes: 3660 x 1220



Concentrated line load-deflection in mm

50 x 50 x 50							
Deflection Span (mm)	Kg/m						Break Point (kg/m)
	150	300	450	600	750	1500	
300	0.305	0.406	0.483	0.635	1.041	1.45	21727
600	0.508	0.813	1.128	1.753	3.327	4.27	11713
900	1.118	2.235	3.2	5.156	6.58	13.46	7780
1200	1.33	2.61	5.98	9.95	11.92	-	5834



Uniformed load-deflection in mm

50 x 50 x 50							
Deflection Span (mm)	Kg/m						
	240	480	980	1450	2450	3650	4880
300	0.254	0.279	0.33	0.381	0.483	0.737	-
600	0.381	0.584	0.965	1.372	2.134	4.115	-
900	1.194	2.108	3.937	5.766	9.449	18.593	-
1200	2.413	4.928	9.957	14.961	16.810	21.575	-



Chemical Resistance Chart Of Molded Gratings

Chemical	Maximum Operating Temperature	
	%Conc.	IFR - 25
Hydrochloric acid	30	65
Nitric acid	35	N/R
Sulphuric acid	25	65
Hydrofluoric acid	10	N/R
Lactic acid	100	65
Hypochlorous acid	SAT	N/R
Citric acid	ALL	N/R
Potassium hydroxide	10	N/R
Sodium hydroxide	10	N/R
Calcium hydroxide	25	65
Calcium hypochloride	25	65
Ferric chloride	100	65
Aluminium chloride	ALL	65
Mercuric chloride	100	65
Silver nitrate	100	65
Sodium salt	ALL	N/R
Zinc chloride	ALL	24
Acetone	100	N/R
Chloroform	100	N/R
Fuel	ALL	38
Nantokite	ALL	65
Phenols	10	N/R
Ozone	ALL	38
Bleaching liquid	ALL	N/R
Ammonium hydroxide	30	N/R
Ammonium salt	ALL	N/R
Black sewage	ALL	N/R
Cupric oxide	ALL	52
Glycol	100	65
Sulfur dioxide	SAT	65
Sodium phosphate	50	N/R
Water	100	65
Alum	ALL	65
Chlorine water	SAT	N/R

ALL-concentrations; SAT-saturated solution; N/R- not recommended; ...-no information available



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