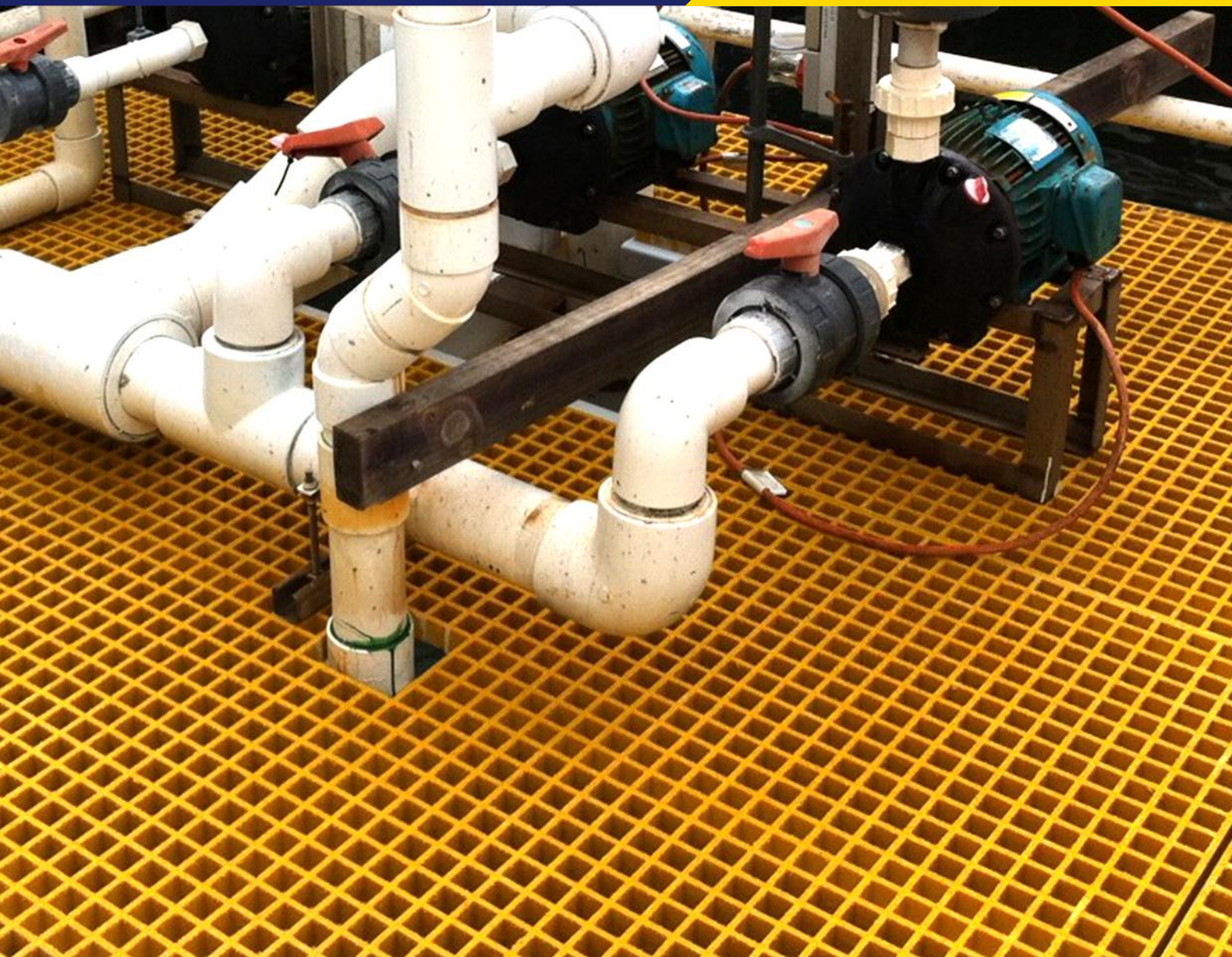
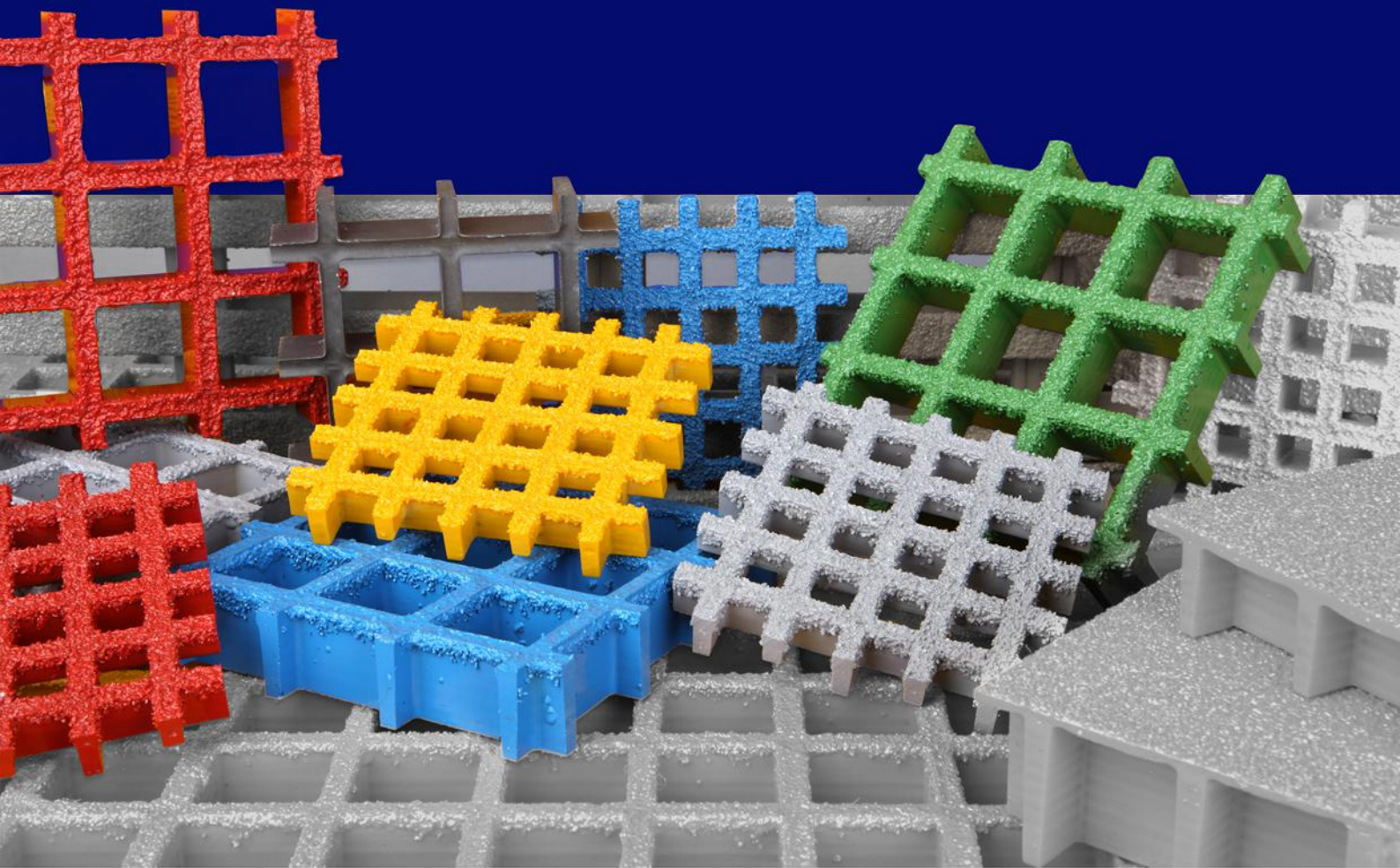


# STAIRCARE FRP GRATING

Tailor-made FRP solutions  
for industries since 2004







## FIBREGLASS MOULDED PRODUCTS

Staircare products are environmentally friendly and offer exceptional corrosion and chemical resistance. They are always prepared with advanced manufacturing techniques. Our FRP gratings are light in weight compared to steel and offer resilient, low maintenance, safe and versatile access.

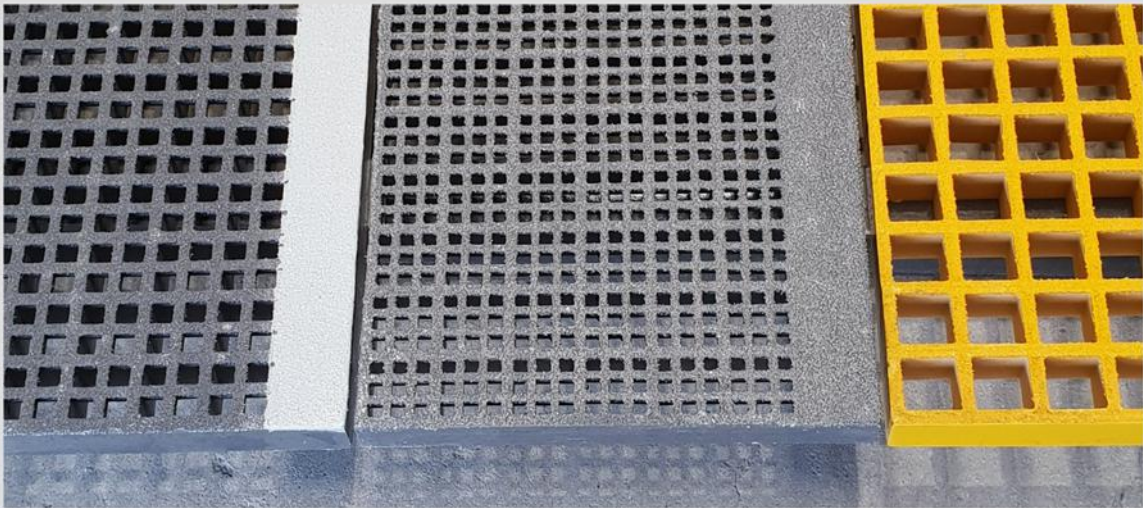
The Staircare Fibreglass Reinforced Polymer Grating make up the core of the FRP range, providing flooring, step and walkway solutions in heavy duty applications, such as factories, workshops and Offshore platforms. Staircare Mini and Micro Mesh FRP systems offer an excellent alternative to conventional flooring products providing the ultimate in corrosion resistance and slip protection. The small mini and micro mesh opening allow the use for wheelchair access ramps and pedestrian walkways. Staircare offer highly innovative product solutions to our clients based on latest tools and techniques.





# STAIRCARE GRATING MARKETS

- ▶ Construction
- ▶ Electrical, Telecommunications and Electronics
- ▶ Transportation, Rail, Road, Tunnel, Bridge
- ▶ Chemical industries
- ▶ Marine, Submarine, and Offshore oil and gas
- ▶ Water and wastewater industries
- ▶ Mine, mass transportation, conveyor
- ▶ Defense, Navy, Aviation
- ▶ Local Government and National Parks
- ▶ Architectural



## BENEFITS



**Corrosion Resistant:** Combining superior corrosion and chemical resistance for enduring structural integrity in extreme environments, unlike metals or wood.



**Adjustable:** Easy and adjustable installation to create a walking surface even on sloped floors using adjustable pedestals in a variety of designs.



**Fire Retardant:** Designed according to ASTM E-84 standard with spread rating of 25 or less as well as self-extinguishing requirements based on ASTM D-635. Tested to AS ISO 9239.1;2003.



**Low Installation Cost:** Unlike steel, Staircare products can be cut easily and quickly with ordinary hand tools and do not require the use of heavy equipment and machinery, thus requiring less manpower and installation costs for elevated flooring.



**Non-Conductive:** Staircare are electrical insulators that increase safety compared to conductive materials (i.e., metal). These products also have low thermal conductivity.



**Light Weight:** Weighing significantly less than steel gratings, FRP gratings from Staircare minimize transportation and installation costs.



**Long Service Life:** Staircare products provide outstanding durability and corrosion resistance in demanding applications. Maintenance costs are reduced and increasing product life saves costs over the life cycle of the product.



**Easy Installation:** System components can be easily repositioned and redesigned if needed for new layouts. The system does not require floor penetration, heavy lifting equipment or hot-work permits.



**Slip-Resistant:** Staircare grating have an imbedded silicon carbide anti-slip grit giving High coefficient of friction and remain safe even when wet. With this unique feature, workers' safety will increase and lead to fewer workplace accidents.



**UV Resistant:** Staircare grating are UV resistant with a special coating.



**Colour:** Grating products can be produced in any colour according to the Staircare catalog.



**Electromagnetic waves:** Metal and concrete constrictions stop all electromagnetic waves while Staircare grating are free for electromagnetic waves. Grating products can be used in radar and defense stations.



# MOULDED GRATING SELECTION & DETAILS

Moulded grating are popular in various parts of the industry. Moulded gratings are a combination of fibres and resins that have been used to replace metal gratings. Moulded gratings are produced in a variety of resins, standard colours, and different panel sizes and mesh configurations and are a great alternative to metal mesh, where there are problems of rust, corrosion or chemical damage. Due to its structure (approximately 65% resin and 35% roving fibreglass,) the grating is unique in terms of corrosion resistance in demanding environments and offers excellent impact resistance. FRP Open grates have good ventilation and drainage properties, they can also be supplied with a solid surface for pedestrian and vehicle traffic.







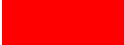
- The allowable cantilever span for the grating is limited to 20% of the simply supported span.

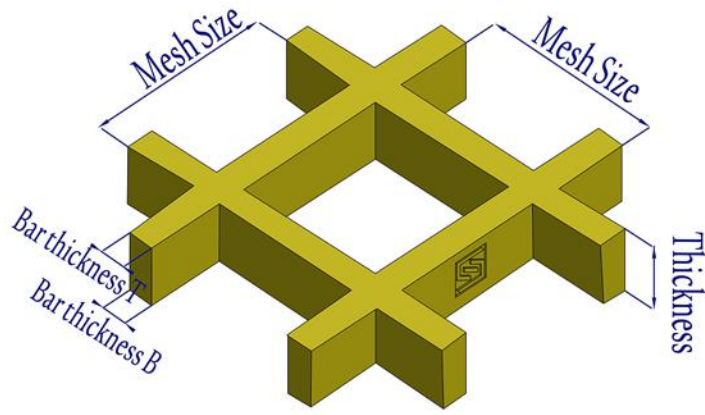


Maximum Span calculation is based on single span assumption. The maximum span will be higher for continuous span condition. Please contact us for more information.

The maximum allowable span has been calculated according to the ultimate and serviceability load combination AS1170.0 (ULS:1.2D+1.6L, SLS=D+0.6L), the maximum deflection was assumed Span/200 and Span/300. The more technical consideration for complex loadings and support conditions are available, please contact us for technical advice.

- Standard FRP grating colours are dark grey, green, yellow, orange, red and light gray. Custom colours available.

FRP GRATING COLOUR	
NAME	COLOR
Light Grey RAL7035	
Slate Grey RAL7015	
Black Grey RAL 7021	
Grass Green RAL6010	
Signal Yellow RAL 1003	
Orange	
Red	

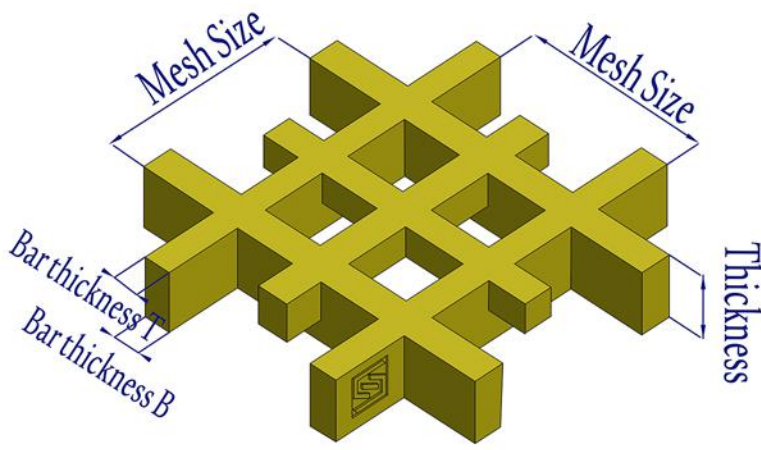


## STAIRCARE MOULDED GRATING – SQUARE MESH

Model	Thickness (mm)	Bar Thickness (Top/Bottom) (mm)	Mesh Size (mm)	Weight (kg/m <sup>2</sup> )	Open Rate (%)	Panel Sizes (mm)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/200)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/300)
MG-S 12×38×38	12	6.0 / 5.0	38×38	6.4	72	1220×3660	373 / 351 / 320 / NOT OK	(325) / (307) / (279) / (259)
MG-S 12×50×50	12	6.3	50×50	4.8	78	1220×3660	355 / 334 / 304 / NOT OK	(310) / (292) / (265) / (247)
MG-S 13×38×38 HD	13	6.0 / 5.0	38×38	6.0	78	1220×3660 1220×4000 1220×2440 921×3055 1264×4010	413 / 389 / 355 / 330	(361) / (340) / (309) / (288)
MG-S 14×38×38	14	6.0 / 5.0	38×38	6.5	78	1220×3660 1220×4000 1220×2440 921×3055 1264×4010	445 / 419 / 382 / 355	(388) / (366) / (333) / (310)
MG-S 15×38×38	15	6.0 / 5.0	38×38	7.0	78	1220×3660 1220×4000 1220×2440 921×3055 1264×4010	476 / 449 / 409 / 380	(416) / (392) / (357) / (332)
MG-S 15×50×50	15	6.0 / 5.0	50×50	5.9	82	1228×4020	435 / 410 / 374 / NOT OK	(380) / (358) / (326) / (303)
MG-S 20×38×38	20	6.0 / 5.0	38×38	9.8	65	1220×3660 1220×4000 1524×4010 997×3012	631 / 596 / 543 / 505	(551) / (520) / (474) / (441)
MG-S 25×38×38	25	6.3	38×38	12.2	70	1220×3660 1226×4010 1530×4010 921×3055 1524×4000 997×3012	798 / 754 / 688 / 641	(697) / (658) / (601) / (559)
MG-S 25×50×50	25	7.0 / 6.0	50×50	11.5	78	1230×4020	755 / 713 / 651 / NOT OK	(659) / (622) / (568) / (528)
MG-S 30×38×38	30	6.0 / 5.0	38×38	14.6	68	1220×3660 1220×4010 921×3055 1524×4010	938 / 886 / 810 / 754	(818) / (774) / (707) / (658)

# STAIRCARE MOULDED GRATING – SQUARE MESH

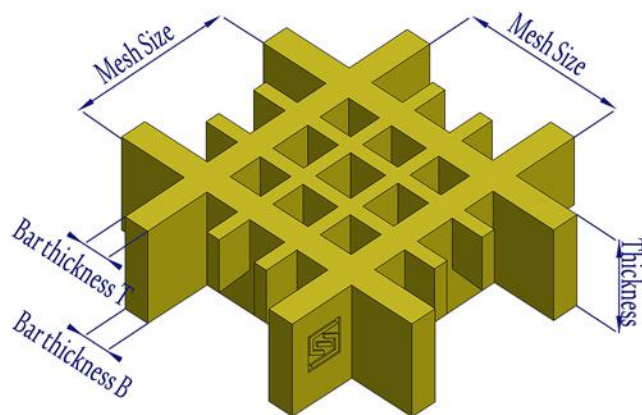
Model	Thickness (mm)	Bar Thickness (Top/Bottom) (mm)	Mesh Size (mm)	Weight (kg/m <sup>2</sup> )	Open Rate (%)	Panel Sizes (mm)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/200)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/300)
MG-S 38×38×38	38	7.0 / 5.0	38×38	19.5	68	1220×3660 1220×4010 1000×4000 2100×4240 998×4010 1220×2440 921×3055 1530×4010 1530×3050 1226×3665	1238 / 1173 / 1073 / 1001	(1081) / (1023) / (937) / (873)
MG-S 40×40×40	40	7.0 / 5.0	40×40	19.5	67	1007×3007 1007×4007 1247×4007 1527×4047	1281 / 1213 / 1111 / 1036	(1119) / (1059) / (969) / (904)
MG-S 40×50×50	40	6.8 / 5.0	50×50	17.5	80	1787×4530	1182 / 1119 / 1023 / NOT OK	(1032) / (976) / (893) / (832)
MG-S 50×38×38	50	9.5 / 7.5 HEAVY DUTY	38×38	42.0	56	1230×4020 1532×4020	1732 / 1650 / 1522 / 1427	(1512) / (1440) / (1329) / (1245)
MG-S 60×38×38	60	10.5 / 8.5 HEAVY DUTY	38×38	50.4	54	1230×4010	2153 / 2054 / 1900 / 1784	(1880) / (1793) / (1659) / (1557)
MG-S 70×38×38	70	11.0 / 9.0 HEAVY DUTY	38×38	58.8	49	1230×4010	2478 / 2368 / 2196 / 2065	(2163) / (2068) / (1917) / (1803)



## STAIRCARE MOULDED GRATING – MINI-MESH

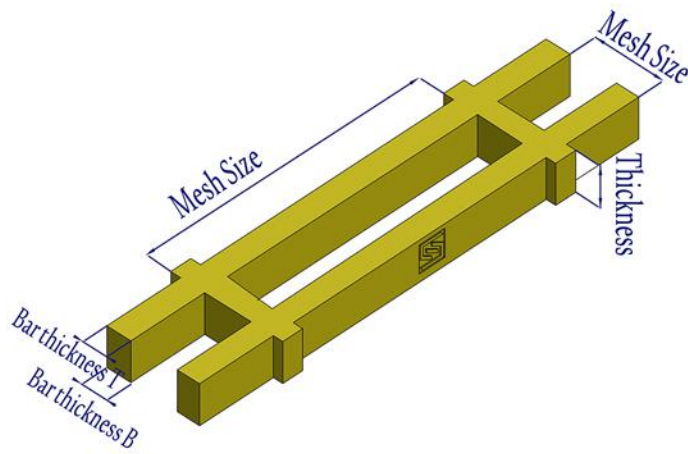
Model	Thickness (mm)	Bar Thickness (Top/Bottom) (mm)	Mesh Size (mm)	Weight (kg/m <sup>2</sup> )	Open Rate (%)	Panel Sizes (mm)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/200)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/300)
MG-mini 14×40×40	14	6.5 / 5.0	40×40	10.5	42	1247×4047 1007×3007	542 / 512 / 467 / 435	(474) / (447) / (408) / (380)
MG-mini 22×40×40	22	6.5 / 5.0	40×40	14.8	42	1247×4047 1007×3007 1527×4047	791 / 748 / 684 / 637	(691) / (653) / (597) / (556)
MG-mini 25×40×40	25	6.5 / 5.0	40×40	16.8	42	1247×4047 1527×4047	890 / 842 / 770 / 718	(777) / (735) / (672) / (626)
MG-mini 30×40×40	30	7.0 / 5.0	40×40	18.3	42	1007×4047 1007×3007 1247×4047 1527×4047	1078 / 1020 / 934 / 871	(941) / (891) / (815) / (760)
MG-mini 38×40×40	38	7.0 / 5.0	40×40	23.2	42	1007×4047 1007×3007 1247×4047 1527×4047	1342 / 1272 / 1166 / 1089	(1172) / (1111) / (1018) / (950)
MG-mini 50×50×50	50	8.0 / 6.0	50×50	28.5	42	1518×4023	1665 / 1580 / 1451 / 1356	(1453) / (1379) / (1267) / (1183)





## STAIRCARE MOULDED GRATING – MICRO-MESH

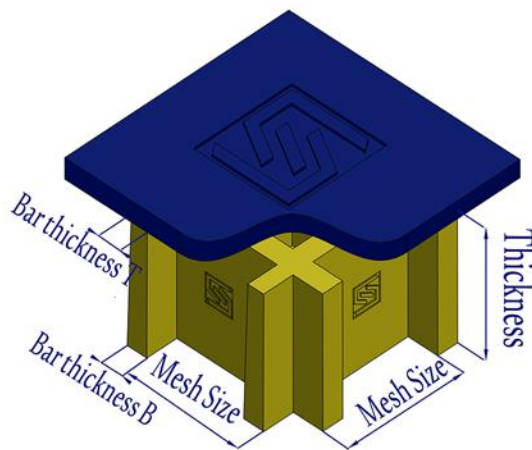
Model	Thickness (mm)	Bar Thickness (Top/Bottom) (mm)	Mesh Size (mm)	Weight (kg/m <sup>2</sup> )	Open Rate (%)	Panel Sizes (mm)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/200)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/300)
MG-Micro 25×40×40	25	6.5 / 4.5 / 5.0	40×40	17.8	30	1247×4047 1007×3007 1007×4047 1530×4047	850 / 805 / 737 / 687	(743) / (703) / (643) / (600)
MG-Micro 30×40×40	30	6.5 / 4.5 / 5.0	40×40	19.1	30	1527×4047 1247×4047 1007×3007 1007×4047	1012 / 959 / 877 / 818	(884) / (837) / (766) / (714)
MG-Micro 38×40×40	38	6.5 / 4.5 / 5.0	40×40	23.8	30	1527×4047 1247×4047 1007×3007 1007×4047	1269 / 1203 / 1103 / 1030	(1108) / (1005) / (963) / (899)



## STAIRCARE MOULDED GRATING – RECTANGULAR MESH

Model	Thickness (mm)	Bar Thickness (Top/Bottom) (mm)	Mesh Size (mm)	Weight (kg/m <sup>2</sup> )	Open Rate (%)	Panel Sizes (mm)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/200)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/300)
MG-R 15×25×101	15	7.9	25×101	9.6	58	1220×3660	597 / 564 / 514 / 478	(521) / (492) / (449) / (418)
MG-R 25×19×101	25	6.3 / 5.02	19×101	14.6	62	1220×3660	966 / 913 / 835 / 777	(843) / (797) / (728) / (678)
MG-R 25×25×101	25	6.4 / 5.2	25×101	13.0	58	1220×3660	887 / 839 / 767 / 715	(775) / (733) / (670) / (624)
MG-R 25×25×101 HD	25	9.5 / 8.0	25×101	19.5	58	1220×3660	1018 / 963 / 880 / 820	(889) / (841) / (769) / (716)
MG-R 38×25×101	38	6.4 / 5.2	25×101	19.8	58	1220×3660	1310 / 1244 / 1144 / 1069	(1144) / (1086) / (998) / (933)
MG-R 38×25×152	38	6.4 / 5.2	25×152	22.5	58	1220×3660	1310 / 1244 / 1144 / 1069	(1144) / (1086) / (998) / (933)
MG-R 38×25×50	38	11.0 / 9.0 HEAVY DUTY	25×50	30.8	48	1220×3660 1220×2440	1570 / 1491 / 1371 / 1283	(1371) / (1302) / (1197) / (1120)
MG-R 38×35×100	38	7.0 / 5.0	35×100	15	63	1407×4277 2407×2982	1219 / 1153 / 1053 / 981	(1164) / (1006) / (919) / (856)
MG-R 38×38×152 HD	38	15.24	38×152	19	62	1500×3660	1609 / 1523 / 1395 / 1301	(1405) / (1330) / (1218) / (1136)
MG-R 40×60×220	40	6.3 / 5.0	60×220	9	67	1788×2238 1788×4250	1063 / 1003 / NOT OK / NOT OK	(927) / (875) / (797) / (741)
MG-R 50×25×50 HD	50	12.0 / 9.0 HEAVY DUTY	25×50	41.8	67	1220×3660 1220×2440	2058 / 1961 / 1810 / 1695	(1797) / (1712) / (1580) / (1481)





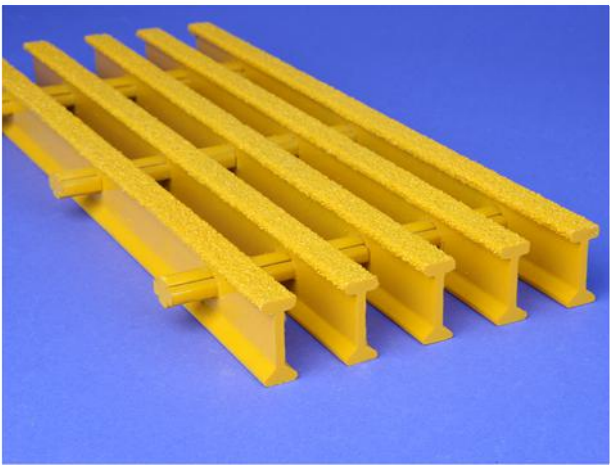
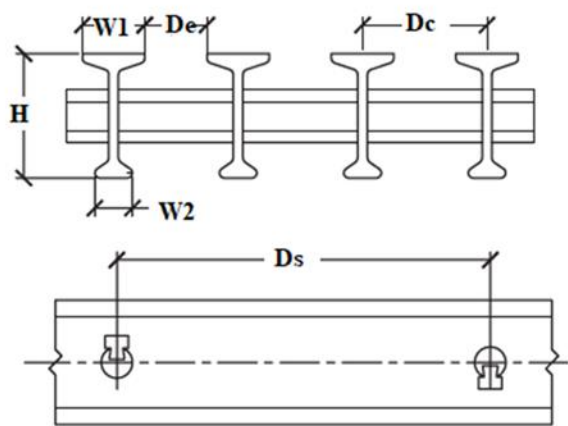
## STAIRCARE MOULDED GRATING – SOLID TOP

Model	Thickness (mm)	Bar Thickness (Top/Bottom) (mm)	Mesh Size (mm)	Weight (kg/m <sup>2</sup> )	Open Rate (%)	Panel Sizes (mm)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/200)	Max Span (mm) @ 2.5 / 3 / 4 / 5 kPa (Span/300)
MG-ST (15+3)×38×38	18	6.4 / 5.2	38×38	14.4	Covered	1220x3660	690 / 652 / NOT OK / NOT OK	(603) / (570) / (520) / (485)
MG-ST (15+5)×38×38	20	6.4 / 5.2	38×38	18.3	Covered	1220x3660	832 / 786 / 718 / NOT OK	(726) / (686) / (627) / (584)
MG-ST (20+3)×38×38	23	6.4 / 5.2	38×38	17.2	Covered	1220x3660	839 / NOT OK NOT OK / NOT OK	(732) / (692) / (632) / (589)
MG-ST (20+5)×38×38	25	6.4 / 5.2	38×38	21.1	Covered	1220x3660	996 / 941 860 / NOT OK	(869) / (822) / (751) / (699)
MG-ST (25+3)×38×38	28	6.4 / 5.2	38×38	20	Covered	1220x3660	865 / 817 / 746 / 695	(865) / (817) / (746) / (695)
MG-ST (25+5)×38×38	30	6.4 / 5.2	38×38	24	Covered	1220x3660	1006 / 951 / 869 / 809	(1006) / (951) / (869) / (809)
MG-ST (30+3)×38×38	33	6.4 / 5.2	38×38	23	Covered	1220x3660	1126 / NOT OK NOT OK / NOT OK	(983) / (930) / (849) / (791)
MG-ST (30+3)×38×38 HD	33	10.5 / 9.0	38×38	33	Covered	1220x3660	1215 / 1149 1050 / NOT OK	(1061) / (1003) / (917) / (854)
MG-ST (38+3)×38×38	41	6.4 / 5.2	38×38	27	Covered	1220x3660	1169 / 1108 / 1015 / 948	(1169) / (1108) / (1015) / (948)
MG-ST (38+5)×38×38	43	6.4 / 5.2	38×38	31	Covered	1220x3660	1317 / 1248 / 1144 / 1068	(1317) / (1248) / (1144) / (1068)
MG-ST (40+3)×40×40	43	6.4 / 5.2	40×40	27	Covered	1220x3660	1376 / NOT OK NOT OK / NOT OK	(1201) / (1139) / (1044) / (975)
MG-ST (40+5)×40×40	45	6.4 / 5.2	40×40	31	Covered	1220x3660	1500 / 1450 / 1330 / 1250	1330 / 1270 / 1160 / 1090
MG-ST (50+3)×50×50	53	6.4 / 5.2	50×50	27	Covered	1220x3660	NOT OK / NOT OK NOT OK / NOT OK	(1326) / (1266) / (1171) / (1099)
MG-ST (50+5)×50×50	55	7.8	50×50	31	Covered	1220x3660	1605 / 1522 / 1397 / 1305	(1605) / (1522) / (1397) / (1305)
MG-ST (50+5)×38×38	55	11.0 / 9.0	38×38	55	Covered	1220x3660	1950 / 1870 / 1720 / 1600	1700 / 1630 / 1500 / 1400
MG-ST (50+3)×38×38 HD	53	11.5 / 9.0	38×38	51	Covered	1220x3660	1817 / 1734 / 1605 / 1507	(1586) / (1514) / (1401) / (1316)
MG-ST (60+3)×38×38	63	11.5 / 9.0	38×38	60	Covered	1220x3660	2157 / 2059 / 1906 / 1790	(1883) / (1798) / (1664) / (1562)
MG-ST (60+5)×38×38	65	11.0 / 9.0	38×38	64	Covered	1220x3660	2300 / 2190 / 2010 / 1880	2010 / 1910 / 1760 / 1640

# PULTRUDED GRATING SELECTION & DETAILS

While the molded grating is a single panel composed of layers of resin and fibreglass, the pultruded grating is made of a set of parallel load-bearing rods - with T-shaped or I-shaped profiles - held together by several perpendicular cross-rods to each other.

Compared to moulded grating of similar sizes, pultruded grating can withstand heavier longitudinal loads - making it suitable for more demanding applications that require tension, compression and bending strengths.



Two standard FRP bearing bar colours are light grey or yellow and the two standard cross rod colours are light grey (polyester) or black (vinyl ester). Custom colours available.

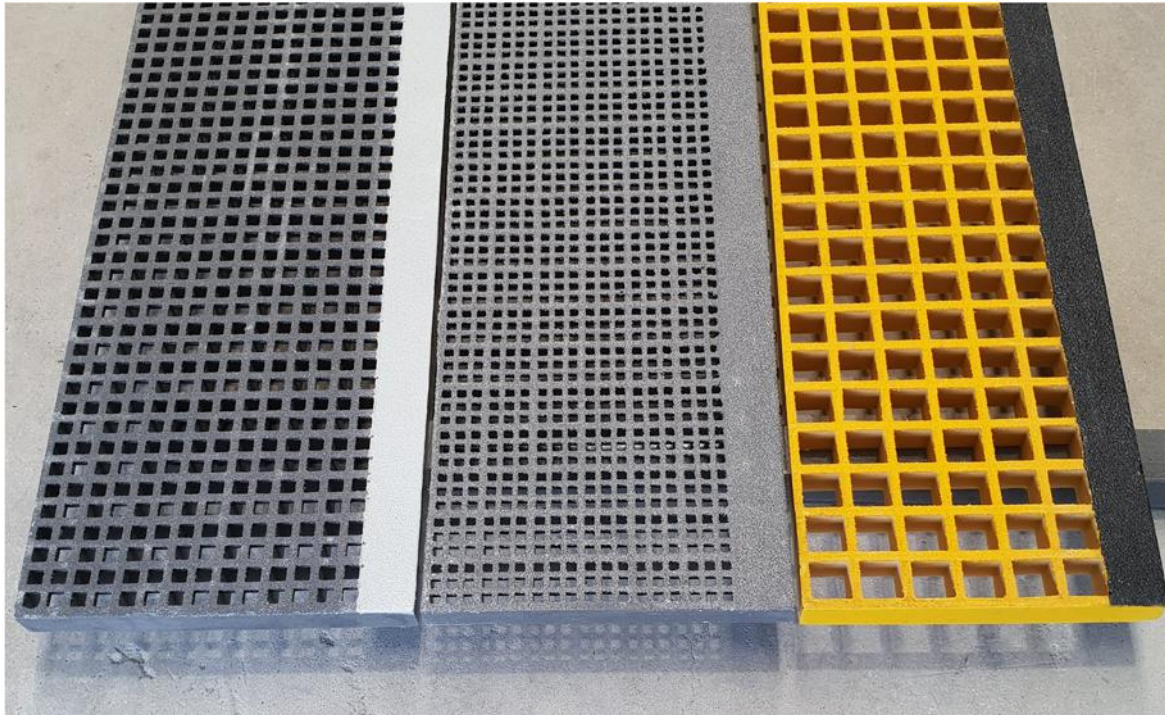
Staircare grating colours		
PART NAME	NAME	COLOURS
Bearing bar	Light Grey	
	Yellow	
Cross rod	Black	
	Light Grey	
	Yellow	



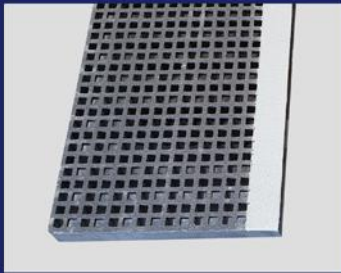
# STAIRCARE SOLUTIONS

Staircare offers 3 different versions of FRP stair treads:

1. Staircare mini mesh stair treads with a solid colour contrasting nosing strip and silicon carbide anti-slip grit and UV protection. Standard tread size is 287mm going x 38mm thick with an aperture of 12x12mm. Length can be up to 4 meters in one piece.
2. Staircare micro mesh stair tread with a solid nose that can be in a contrasting colour on request and silicon carbide anti-slip grit with UV protection. Standard tread size is 287mm going x 38mm thick with an aperture of 8x8mm, length can be up to 4 meters in one piece.
3. Staircare 38 x 38 square mesh stair treads with a solid colour contrasting nosing strip and heavy duty silicon carbide anti-slip grit with UV protection as standard, for industrial use. Standard size is 272mm going x 38mm thick with an aperture of 31x31mm, length can be up to 3.66 meters in one piece.



Australian Standard for stair and landings require a design uniform distributed load of 4Kpa (400kg/m<sup>2</sup>) and point load of 1.8Kpa (180kg) Deflection L/250. Recommendation for pedestrian comfort is maximum 5mm deflection



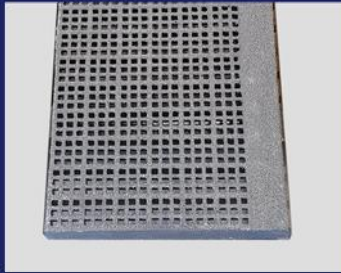
**Staircare 20 X 20 / 40 X 40 Mini Mesh Stair Tread With Solid Nose, Silicon Carbide Anti-Slip Grit and UV Protection**

Max. recommended Span mm	Tread width mm	going mm	thickness mm	tread support mm	aperture mm	open rate
900	995	287	38	50x6.4	12 x 12	42

**Load and Deflection at Max. Recommended Span of 900 mm**

Uniform load Kpa (deflection in mm)			Concentrated point load kg		
span	2.5 kpa	4.0 kpa	span	200 kg	400 kg
900	1.45	2.4	900	2.42	4.84



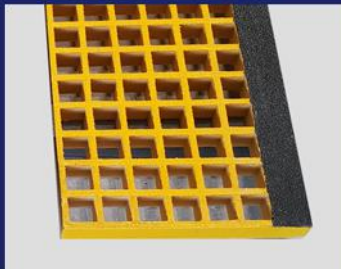


**Staircare 13 x 13 /40 x 40 Micro Mesh Stair Tread With Solid Nose, Silicon Carbide Anti-Slip Grit and UV Protection**

Max. recommended Span mm	Tread width mm	going mm	thickness mm	tread support mm	aperture mm	open rate
900	995	287	38	50x6.4	8x8	30

**Load and Deflection at Max. Recommended Span of 900 mm**

Uniform load Kpa (deflection in mm)			Concentrated point load kg		
span	2.5 kpa	4.0 kpa	span	200 kg	400 kg
900	1.40	2.36	900	2.28	4.80



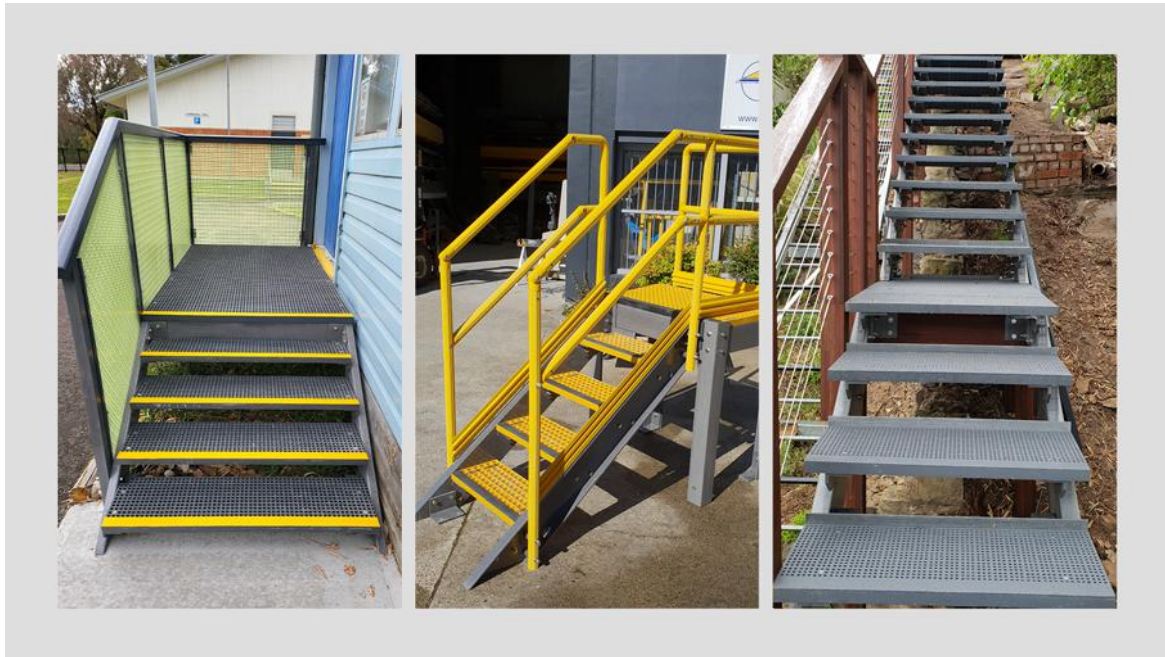
**Staircare 38 x 38 Square Mesh Stair Tread with-Heavy Duty Silicon Carbide Anti-Slip Grit and UV Protection**

Max. recommended Span mm	Tread width mm	going mm	thickness mm	tread support mm	aperture mm	open rate
900	995	272	38	50x6.4	31x 31	68

**Load and Deflection at Max. Recommended Span of 900 mm**

Uniform load Kpa (deflection in mm)			Concentrated point load kg		
span	2.5 kpa	4.0 kpa	span	200 kg	400 kg
900	1.71	2.58	900	2.60	6.18

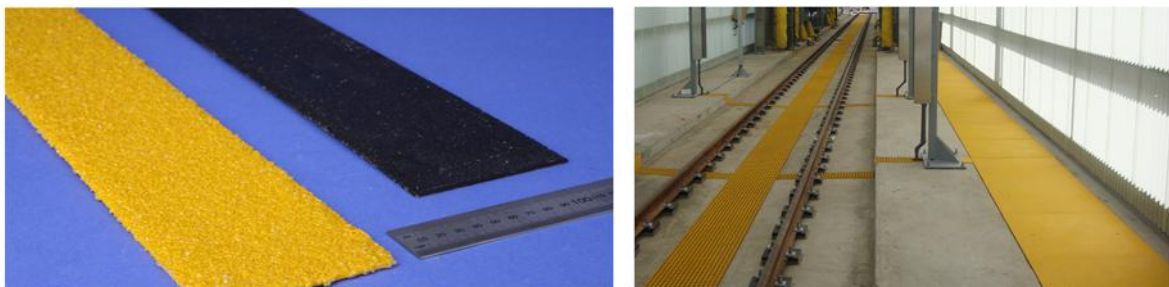
Staircare Composite Staircase Systems combine FRP grating, flooring, stair treads, structural shapes and handrails to an FRP System that provides non-corrosive, non-conductive resilient safe and versatile access.



Staircare resilient, low maintenance FRP fibreglass reinforced polymer staircases built to measure, including embedded silicon carbide anti-slip grit for high slip resistance.

## FLOOR PLATE

FRP Anti-slip floor plates are manufactured with the same materials as grating and stair treads. They are suitable for high exposure to salt water and offer high resistance to chemicals such as; acid, alkali and solvent liquids. FRP anti-slip plates are non-conductive, non-magnetic and contain a fire retardant. Plates are approximately 4mm thick and supplied in different custom made sizes with a variety of anti-slip grits ranging from light to heavy duty. FRP anti-slip plates are ideal for wet or dry conditions where good slip resistance and traction are needed.



Staircare products are made to measure and since it is a finished product it can be used immediately.



# FRP SOLID TOP COVER GRATING

Moulded square mesh with solid top cover offers bi-directional strength and are ideal for installations requiring multiple penetrations. Panels are available with silicon carbide anti-slip grit and offer light but strong Trench covers, Walkways, Cable troughs and Pit covers.



## GRATING COLOURS

Staircare uses the international “RAL” colour system that is used for defining standard colours for varnish, powder coating and plastics. The resin and colour pigment mix in combination with UV inhibitors ensures that colour is throughout the materials, requiring no or very little painting maintenance, adding to a long service life.

Staircare has standardized RAL colours for FRP Grating, structural profiles and handrails, colour codes include: RAL1003 Signal Yellow, RAL7015 Slate Grey, RAL7035 Light Grey, RAL7021 Black Grey, RAL6010 Grass Green, please contact us to discuss your colour requirements.



### UV PROTECTION

UV inhibitors are mixed into the resin and also into a synthetic veil that is incorporated on the surface, ensuring optimum protection from UV radiation and the harsh outdoors. An optional UF coating can be applied for products with extreme UV exposure, such as offshore platforms.

### TRANSLUCENT GRATING

FRP Moulded Grating can be produced with a translucent finish to create a light and airy feel

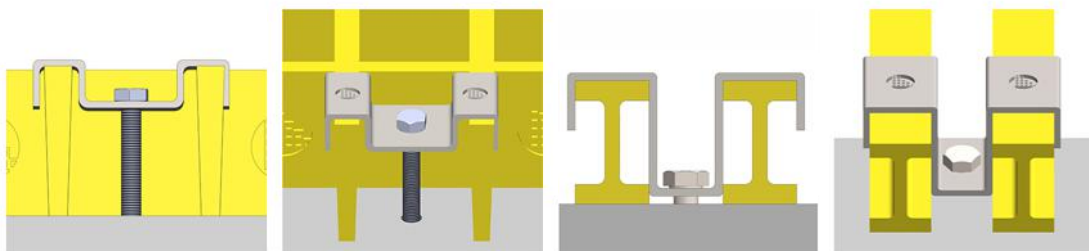
# GRATING CONNECTIONS

Staircare Grating products are adaptable and can be installed on any substrate with minimal effort. Fitting with mechanical fixings is well within the capabilities of a handy person.

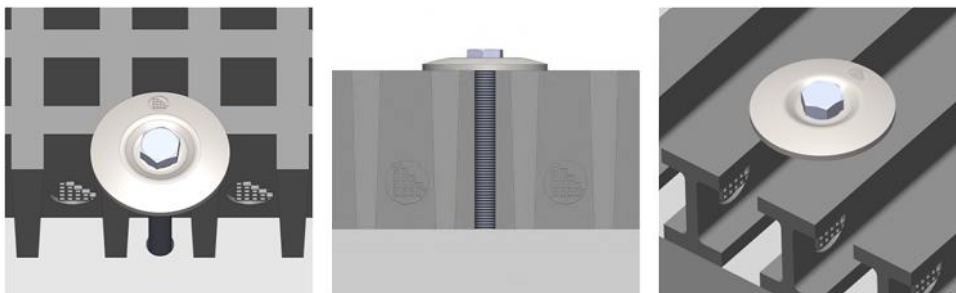
The majority of fixing is achieved with three types of standard clips made of SS316 stainless steel for securing or joining FRP panels. There are many more specialist type of fixings as demonstrated in the following graphics, please contact us to discuss your special application. The bolts/nut/washer material specification can be FRP, HDG, or SS316.



- ▶ M-Clips - Hold down clips for securing grating to substrate
- ▶ L-Clips – Used for fixing grating to support frames
- ▶ G-Clips – For connecting two adjacent load bars



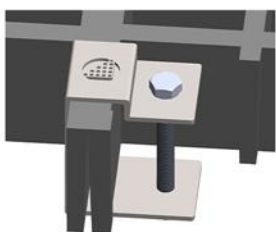
W-Clips are made for fixing solid plates, Mini or Micro mesh grating. The length of the bolt corresponds with the panel and substrate thickness.



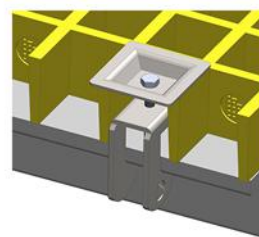
L-Clips (J-clips) are used to fasten moulded or pultruded grating to a support bar for moderate loads.



C-Clips (end panel clip) are used to join two ends of moulded grating together.



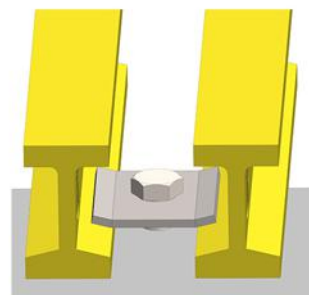
G-Clips are designed to attach grating to any structural member flange, the size is governed by the load bar dimension and drilling is not required.



J- Bolts are used to secure grating to a support bars.



T-Clips are used to fasten pultruded grating to support frames.

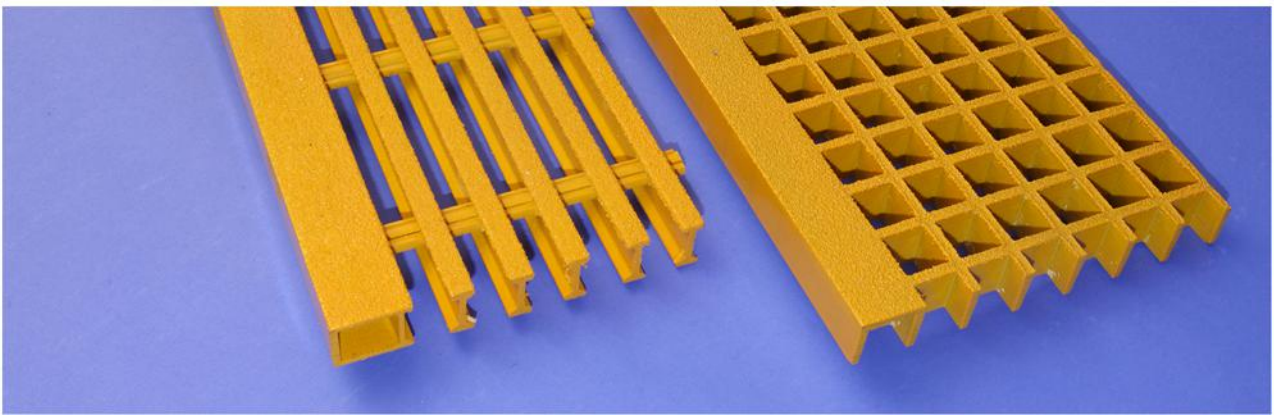




# STAIRCARE MATERIAL DESCRIPTION

## WHAT ARE MOULDED FRP GRATING

Moulded FRP grating is composed of alternating directional layers of continuous glass fibre for strength, with resin to consolidate the fibres and provide the shape and corrosion resistance. Due to its bi-directional strength, moulded grating can tolerate cutouts in the panel to allow pipe or equipment penetrations without requiring additional support around the opening. Moulded grating has very high impact tolerance, as well as the highest chemical resistance of any fibreglass grating it can be made slip-resistant by adding grit to the surface.



## WHAT ARE PULTRUDED FRP GRATING AND STRUCTURAL PROFILES

Staircare components including Pultruded grating and structural shapes are manufactured using the well proven pultrusion process. Multi-directional glass mats and continuous fibre roving as well as a synthetic veil are drawn through a resin bath that also contains the required colour pigments and is then pulled through a heated die to form the desired shape. The process creates an exceptional composite material with colour throughout, excellent corrosion resistance and UV inhibitors in the resin matrix and synthetic surfacing veil.



## **Corrosion Resistance**

Staircare railings, structural shapes and grating have exceptional corrosion resistance to a wide variety of chemical and petrochemical spillage, saltwater, fume and fire resistance making the products ideal for use in the harshest environments.

## **Life Time Cost**

Staircare materials provide significantly longer life expectancy, durability and corrosion resistance in demanding applications. The resin and colour pigment mix in combination with UV inhibitors ensures that colour is throughout the materials, requiring no or very little painting maintenance, adding to a long service life.

## **Electrical and Thermal Non Conductivity**

FRP fibreglass is electrically non-conductive providing safety benefits for installation in electrical substations or mitigate situations with stray current issues, to reduce step and touch voltage hazards. Low thermal conductivity makes for a comfortable material to work with that can also be a safety feature. Unlike metals FRP products do not contract or expand.

## **UV Protection**

UV inhibitors are mixed into the resin and also into a synthetic veil that is incorporated on the surface, ensuring optimum protection from UV radiation and the harsh outdoors. An optional UV coating can be applied for products with extreme UV exposure, such as off-shore platforms etc.

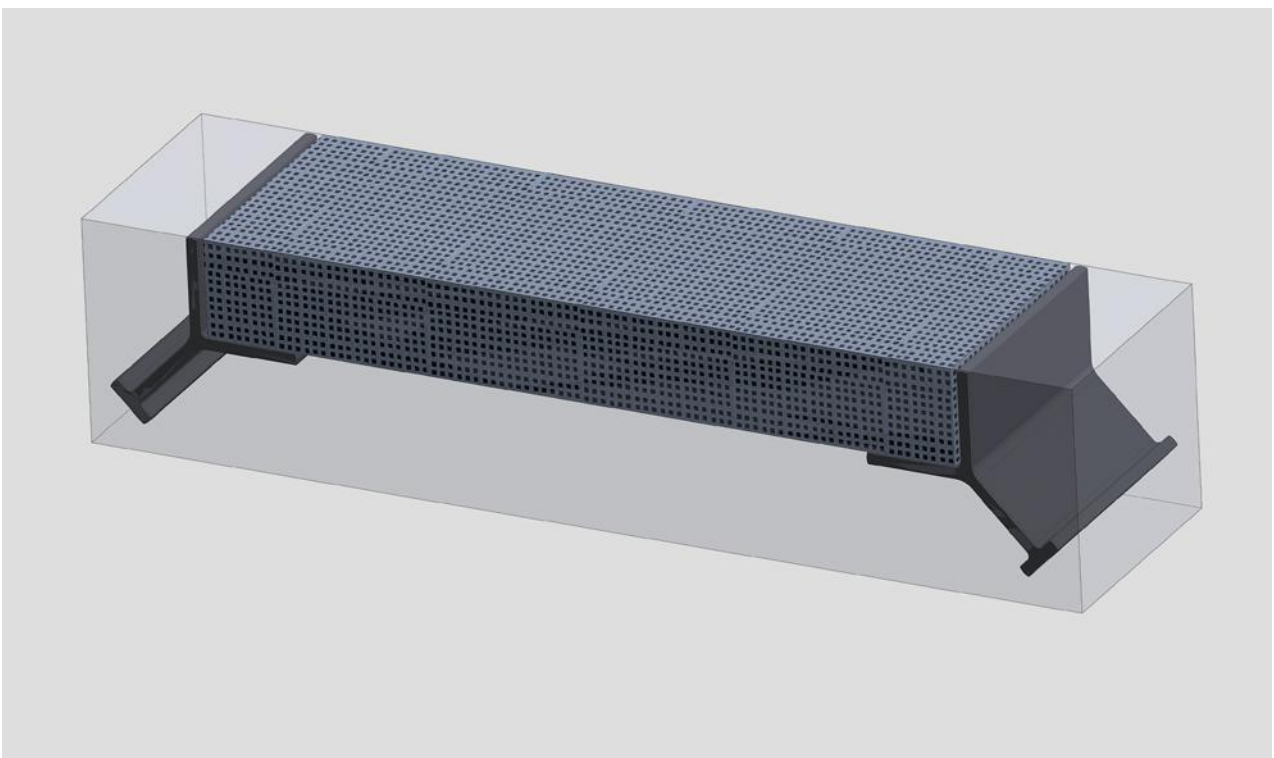
## **Environmental Impact**

Staircare pultruded and moulded FRP manufacture produces less greenhouse gas and consumes less energy compared with alternative materials such as steel and aluminum. FRP materials do not corrode or deteriorate and offer a very long service life and can be recycled.

# STAIRCARE EMBEDMENT ANGLE

The embedment angle is manufactured with premium-grade vinyl ester fire retardant resin. It is compatible with our standard sizes of Staircare Moulded and FRP Pultruded grating. Continuous anchoring is incorporated into the design to eliminate the need for additional anchors. The embedment angle is available in dark grey.

Embedment angels are set into concrete slabs with the T shape back securing it in place. It is light and easy to cut, and will not rust. It is also non-conductive. Embedment angel is made from vinyl ester resin.



Size (mm)
A x B x T
25 x38x6.4
38x38x6.4
50x38x6.4



## CHEMICAL RESISTANCE GUIDE

Staircare is manufactured with high quality fibreglass reinforced resin. Our standard product lines use the superior isophthalic polyester resin. For special applications Staircare offers vinyl ester resin as an alternative. Chemical resistance guide for moulded products (grated stair tread) are available on request.

CHEMICAL	ISOPHTHALIC POLYESTER		VINYL ESTER RESIN	
Environment	%Concentration	Max. Opera. Temp F/C	%Concentration	Max. Opera. Temp F/C
Acetic Acid	50	125/52	50	180/82
Aluminum Hydroxide	100	160/71	100	170/77
Ammonium Chloride	ALL	170/77	ALL	190/88
Ammonium Hydroxide	28	N/R	28	100/38
Ammonium Bicarbonate	15	125/52	50	150/65
Ammonium Sulphate	ALL	170/77	ALL	200/93
Benzene	N/R	N/R	N/R	N/R
Benzoic Acid	SAT	150/66	SAT	200/93
Borax	SAT	170/77	SAT	200/93
Calcium Carbonate	SAT	170/77	ALL	180/82
Calcium Nitrate	ALL	180/82	ALL	200/93
Carbon Tetrachloride	N/R	N/R	100	75/24
Chlorine Dry Gas	...	140/60	...	170/77
Chlorine Water	SAT	80/27	SAT	180/82

CHEMICAL	ISOPHTHALIC POLYESTER		VINYL ESTER RESIN	
Environment	%Concentration	Max. Opera. Temp F/C	%Concentration	Max. Opera. Temp F/C
Chromic Acid	5	70/21	10	120/49
Citric Acid	ALL	170/77	ALL	200/93
Copper Chloride	ALL	170/77	ALL	200/93
Copper Cyanide	ALL	170/77	ALL	200/93
Copper Nitrate	ALL	170/77	ALL	200/93
Ethanol	50	75/24	50	90/32
Ethylene Glycol	100	90/32	100	200/93
Ferric Chloride	ALL	170/77	ALL	200/93
Ferrous Chloride	ALL	170/77	ALL	200/93
Formaldehyde	50	75/24	ALL	100/38
Gasoline	100	80/27	100	150/65
Glucose	100	170/77	100	200/93
Glycerin	100	150/66	100	200/93
Hydro Bromic Acid	50	120/49	50	120/49
Hydrochloric Acid	37	75/24	37	100/38
Hydrogen Peroxide	5	100/38	30	100/38
Lactic Acid	ALL	170/77	ALL	200/93
Lithium Chloride	SAT	150/66	SAT	200/93
Magnesium Chloride	ALL	170/77	ALL	200/93
Magnesium Nitrate	ALL	140/60	ALL	180/82

CHEMICAL	ISOPHTHALIC POLYESTER		VINYL ESTER RESIN	
Environment	%Concentration	Max. Opera. Temp F/C	%Concentration	Max. Opera. Temp F/C
Magnesium Sulphate	ALL	170/77	ALL	190/88
Mercuric Chloride	100	150/66	100	190/88
Mercurous Chloride	ALL	140/60	ALL	190/88
Nickel Chloride	ALL	170/77	ALL	180/82
Nickel Sulphate	ALL	170/77	ALL	200/93
Nitric Acid	20	70/21	20	200/93
Nitric Acid	ALL	75/24	ALL	100/38
Perchloric Acid	N/R	N/R	30	120/96
Phosphoric Acid	100	120/49	100	80/27
Potassium chloride	ALL	170/77	ALL	200/93
Potassium Dichromate	ALL	170/77	ALL	200/93
Potassium Nitrate	ALL	170/77	ALL	200/93
Potassium Sulphate	ALL	170/77	ALL	200/93
Propylene Glycol	ALL	170/77	ALL	200/93
Sodium Acetate	ALL	160/77	ALL	200/93
Sodium Bisulphate	ALL	170/77	ALL	200/93
Sodium Bromide	ALL	170/77	ALL	200/93
Sodium Cyanide	ALL	170/77	ALL	200/93
Sodium Hydroxide	N/R	N/R	25	150/66
Sodium Nitrate	ALL	170/77	ALL	200/93



CHEMICAL	ISOPHTHALIC POLYESTER		VINYL ESTER RESIN	
Environment	%Concentration	Max. Opera. Temp F/C	%Concentration	Max. Opera. Temp F/C
Sodium Sulphate	ALL	170/77	ALL	200/93
Stannic Chloride	ALL	160/71	ALL	200/93
Sulphuric Acid	25	75/24	75	100/38
Tartaric Acid	ALL	170/77	ALL	200/93
Vinegar	100	170/77	100	200/93
Water, Distilled	100	170/77	100	180/82
Zinc Nitrate	ALL	170/77	ALL	200/93
Zinc Nitrate	ALL	170/77	ALL	200/93

ALL : concentrations | SAT – Saturated Solution | N/R – Not Recommended | ... : No info. Available

## REMARKS:

The corrosion resistance data listed above is for general information only. Resin manufacturers have provided test data, which indicates that the specific resin can withstand the corrosion conditions listed above. Staircare believes the data to be true and accurate but no guarantee is expressed or implied as to specific performance. Testing for specific environments is recommended. Our responsibility for claims arising from breach of warranty, negligence or otherwise is limited to the purchase price of the materials sold by Staircare.

# STAIRCARE FRP GRATING



staircare Australia Pty Lt

📍 2/84 old Pittwater Road, Brookvale NSW 2100, Australia

☎ +61 (2) 9939 4497      🌐 [www.staircare.com.au](http://www.staircare.com.au)

✉ [info@staircare.com.au](mailto:info@staircare.com.au)

