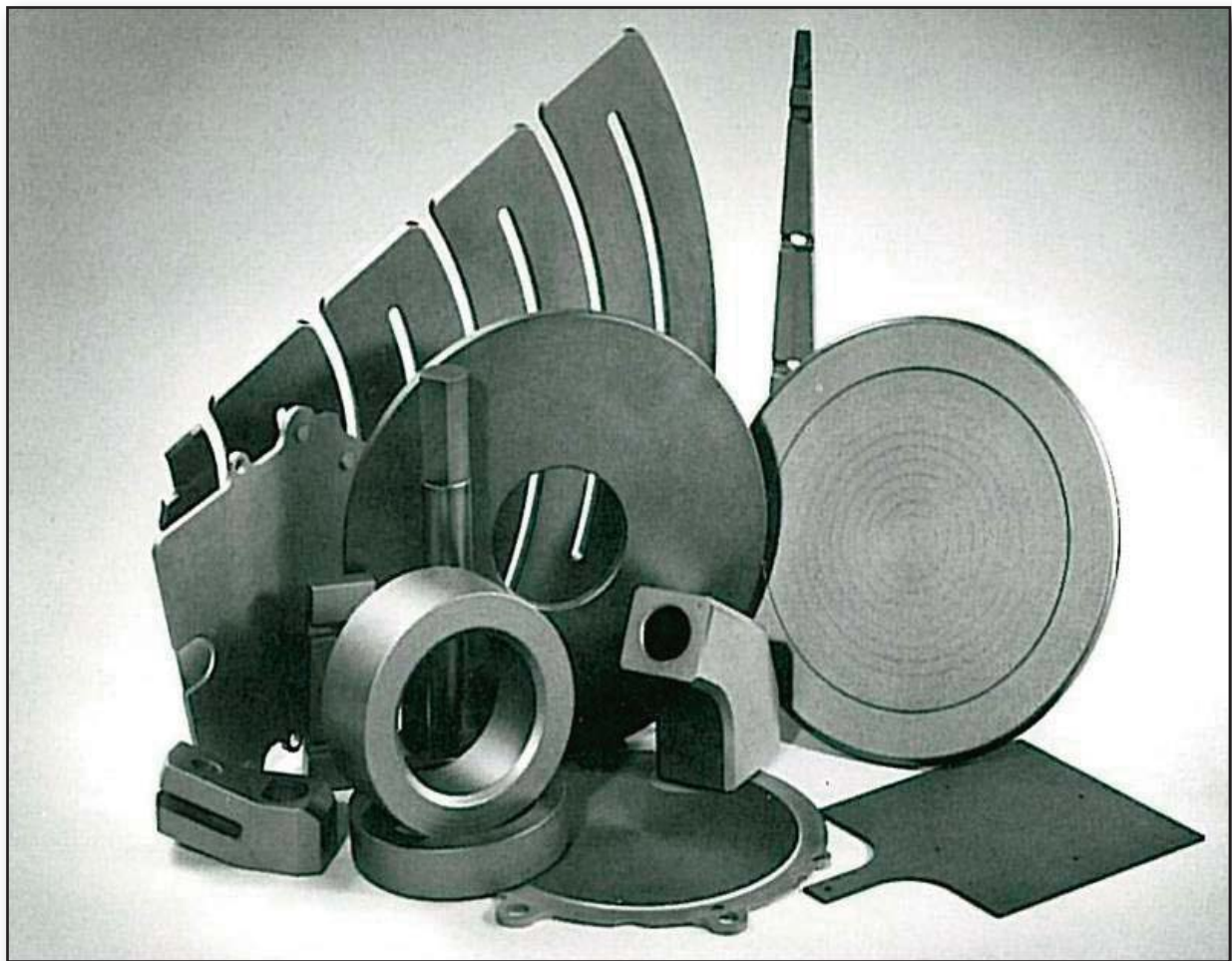


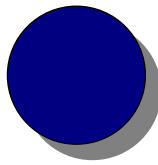
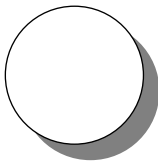
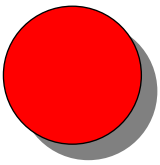


Anglia Composites

Fibreglass Grating Technical Data Sheets



Technical data sheets for high performance, corrosion resistant fibreglass grating for industry



BENEFITS OF FIBREGLASS GRATING



CHEMICAL RESISTANT

Fibreglass grating is resistant to a wide range of chemicals both caustic and acidic. This is achieved by the use of premium grade resins during manufacture. A comprehensive chemical resistance data chart is available on request.



IMPACT RESISTANT

Fibreglass grating will allow repeated deflection without permanent deformation. Deflection will occur with the impact of a heavy object. However, once the object is removed, fibreglass grating will return to its original shape unlike metallic grating, which will remain deformed.



SLIP RESISTANT

The slip resistant feature of fibreglass grating is created during the moulding process when the top surface naturally shrinks back to create a concave effect surface. This is then filled with a hard wearing quartz grit to provide an extended life with amazing anti-slip properties.



FIRE RESISTANT

Our fibreglass grating has been tested in accordance with the ASTM-E-84 tunnel test method and has achieved a class 1 flame spread rating or less. It has also achieved a class 1 rating in accordance with BS 476. A copy of this report is available on request.

COSHH SAFETY DATA SHEET – FIBREGLASS GRATING

MATERIAL IDENTIFICATION AND USE

Chemical Name Floor Grating made of Fibreglass Reinforced Polyester
Common Name Glass Reinforced Plastic Grates. (Fibreglass Grating)
Use Floor, wall.

INGREDIENTS

Fibrous Glass, Polyester Resin, Catalyst (Peroxyester), Styrene, Aluminium Oxide, Pigments. Ingredients are chemically cured and bonded together.

HAZARD IDENTIFICATION

Acute Affect None by contact. Dust produced by cutting or grinding can penetrate the pores of the skin causing itching. Avoid breathing dust.

Routes of Entry Skin contact or inhalation of dust when cutting.

Medical Note People who have a condition that could be aggravated by dust should avoid cutting or grinding. Use 3M-respirator mask No. 4251

First Aid Procedures Skin – Remove person from dust area and shower with soap and water until itching stops.
Eyes – Flush at once with a sterile eye wash solution.

CHEMICAL DATA

Appearance Solid, flat panels with grid pattern. Green, Grey and Yellow are standard colours. Sharp edges or grit applied to top surface. Nil odours. Not soluble in water. Specific Gravity 1.6.

FIRE FIGHTING MEASURES

Product will burn. Avoid direct fire source. Flash point: none. Flammability limits: none. Extinguishing Media, Water, foam, A, B or C fire extinguishers. Black smoke, Carbon particles. Use air respirator. Self-extinguishing.

WASTE DISPOSAL

Abide by local laws and procedures. Product is not considered a hazardous waste.

HANDLING/CUTTING

Wear masks, and goggles when cutting or grinding. Cover all exposed parts of the body. Wear gloves when moving or lifting. If using a jigsaw, use Bosch T141HM blade otherwise use diamond tools.

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COSHH SAFETY DATA SHEET – URETHANE SEALANT

For sealing cut edges of fibreglass grating.

MATERIAL IDENTIFICATION AND USE

COMMON NAME	Urethane clear varnish sealant
USE	Seals cut ends of fibreglass, thus protecting from water and other liquid intrusion.
INGREDIENTS	Urethane clear liquid varnish.
PROTECTION	Wear face mask for large areas or areas where space is confined. Wear protective gloves. Ensure maximum ventilation. Keep away from children and pets at all times. Product has a strong odour.
ROUTE OF ENTRY	Skin contact.
MEDICAL NOTE	Avoid contact with skin and eyes. In cases of contact with eyes, rinse with water at once and seek medical advice. After contact with skin, wash with plenty of soap and water.
FIRE MEASURES	Product is highly flammable. Keep away from naked flame and any direct heat source. Do not smoke, eat food or drink while using this product.
WASTE DISPOSAL	Abide by local authority laws and procedures. In all cases, never dispose of where sealant can creep into the watercourse.

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GRATING DEFLECTION TABLE

POINT LOAD kg

25mm thick supported on four sides

Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	170	245	270	650
1.5m	190	250	280	700
1m	255	270	350	755

38mm thick supported on four sides

Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	510	580	800	1430
1.5m	530	600	890	1880
1m	660	760	1030	2200

25mm thick supported on two sides

Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	160	220	260	620
1.5m	170	230	345	640
1m	195	245	360	650

38mm thick supported on two sides

Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	460	545	760	1400
1.5m	480	570	770	1430
1m	500	575	790	1430

UNIFORM LOAD kg

25mm supported on four sides

Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	290	355	750	3750
1.5m	375	480	825	4200
1m	570	760	990	4805

38mm thick supported on four sides

Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	730	1100	1850	6700
1.5m	770	1250	2300	7950
1m	1445	2100	2650	8800

25mm thick supported on two sides

Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	265	320	630	2800
1.5m	340	470	825	3105
1m	370	510	940	3500

38mm thick supported on two sides

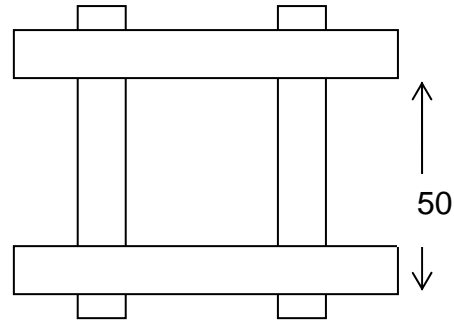
Width	1m	0.9m	0.75m	0.5m
Length	*10mm	*9mm	*7.5mm	*5mm
2m	725	865	1800	4950
1.5m	805	980	1975	5620
1m	890	1370	2310	7245

* The deflection figures quoted are based on 1/100th of the width

ULTIMATE DESTRUCTION EXAMPLES; Concentrated load, 300 mm wide 12,300 kilos, 450mm wide 7,900 kilos, 900 mm wide 3,700 kilos, 1200 mm wide 1,900 kilos.

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50mm thick fibreglass grating data



Whole mesh sizes

60	1074
110	1125
160	1175
211	1256
262	1277
313	1328
363	1379
415	1430
465	1481
516	1532
566	1582
617	1633
668	1684
720	1735
770	1786
820	1837
871	1858
922	1939
973	1990
1024	

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Anglia Composites recommends maximum deflection of 1% of the span as a comfortable user loading. Breaking point data represents total failure of the grating and illustrates the reserve strength of the material at a given span.

Standard panel sizes are 2m x 1m and 3.66m x 1.22m. Gritted surface as standard. Green is standard colour. Weight: 22kgs m². Bars per 305mm: 6. Bar thickness, top – 8mm, bottom – 5.5mm. 71% open area. Non conductive.

Load & Deflection Data

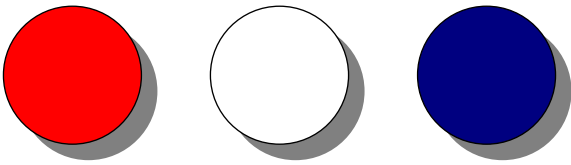
Span (mm)	Uniform Load (kg)	Concentrated Load (kg)	Line Load	Breaking Point
	Deflection 1%	Deflection 1%	Deflection 1%	
1400	625	480	525	4150 kg
1200	825	655	690	4600 kg
1000	1410	820	840	5600 kg
800	2150	1175	1260	6850 kg
600	3200	1460	1510	7800 kg
500	4500	2100	2230	8500 kg

Mini-Mesh Grating Load Deflection Data

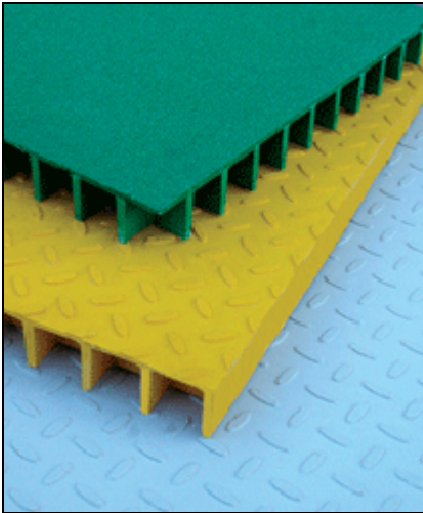
Panel Thickness	SPAN	Point Load Kg	Concentrated Line Load Kg/m	Uniformly Distributed Load Kg/m ²
14mm	250mm	311	391	622
	500mm	80	95	155
22mm	250mm	788	1154	1909
	500mm	288	312	488
	600mm	202	240	341
	700mm	120	140	214
	1000mm	74	81	123
30mm	500mm	741	912	1441
	600mm	502	628	1003
	750mm	320	401	639
	1000mm	187	226	354
	1200mm	126	156	244
38mm	500mm	1344	1817	2905
	600mm	1022	1262	2010
	750mm	645	800	1281
	1000mm	366	450	725
	1200mm	255	315	510
	1500mm	165	202	322

The figures quoted are approximate and can vary from application to application. They are based on average conditions and represent a 1% deflection of the total span. The figures are not ultimate destruction figures which are many times more than quoted. If you are in doubt please ask about your specific requirement.

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SOLID SURFACE GRATING



Our solid surface grating is available from stock in 25mm and 41mm depths in Green, Grey and Yellow. They have a gritted surface as standard for superior anti-slip properties.

The solid surface is 3mm thick and can be manufactured with a gritted, chequer plate or smooth finish. The surface is bonded to the gratings using a high strength resin and glass reinforcement to allow permanent adhesion.

41mm thick solid surface grating deflection data

Span	<u>Point Load</u> (kg) 1 % Deflection	<u>Concentrated</u> <u>Line Load</u> (kg/m) 1% Deflection	<u>Uniformly</u> <u>Distributed Load</u> (kg/m ²) 1% Deflection
250mm	6,605	9,150	18,255
500mm	3,310	4,602	8,028
750mm	2,027	2,293	3,543
1000mm	1,161	1,232	2,014
1200mm	784	876	1,367

25mm thick solid surface grating deflection data

Span	<u>Point Load</u> (kg) 1 % Deflection	<u>Concentrated</u> <u>Line Load</u> (kg/m) 1% deflection	<u>Uniformly</u> <u>Distributed Load</u> (kg/m ²) 1% Deflection
250mm	2,025	2,668	5,529
500mm	845	918	1,467
750mm	382	406	649
1000mm	226	227	354
1200mm	140	158	252

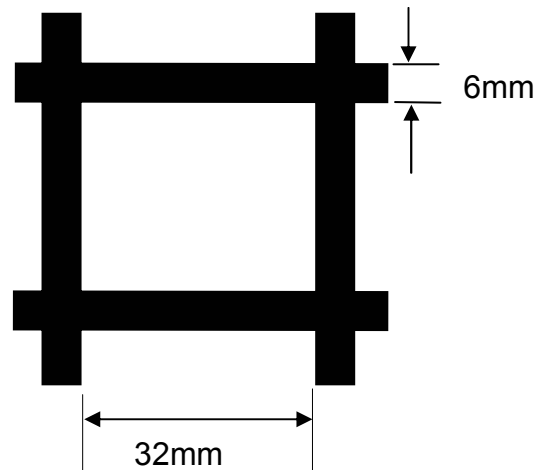
MECHANICAL AND PHYSICAL DATA OF MOULDED FIBREGLASS GRATING

Grating Depth	BAR THICKNESS		PER 300MM OF WIDTH				No. of Bars Per 300mm	Glass Content %	Weight Kg/m ²	Open Area %
	TOP	BTM	CM ²	CM ⁴	CM ³	EI KG/M ²				
38mm	6.60	5.00	17.74	21.81	11.31	275	8	30.5	18.0	69.0
25mm	6.60	5.50	12.39	6.71	5.24	119	8	32.0	12.0	69.0

WEIGHT

25 mm: 12 kilos per square metre

38 mm: 18 kilos per square metre



MECHANICAL DATA

Elastic Modulus	27 Gpa
Flexural Strength	2.8 Gpa
Tensile Strength	650 Mpa
Compressive Strength	90 Mpa
Dielectric Strength	18 KW/mm
Specific Gravity	1.5÷1.7
Thermal Expansion Factor	13 x 10 ⁻⁶ mm/mm C ^o
Water Absorption	0.1% + 0.3% x 24 hours (ISO R62)
Operating Temperature	-100c to +180c

MANUFACTURING TOLERANCES

Standard Panel Size	+ 3 mm	-0 mm
Cut Panel Size	+ 5 mm	- 5 mm
Thickness	+ 1.5 mm	- 1mm
Mesh Pattern	+ 1mm	- 1mm

Weight of gratings, tread covers and flat plates.

12mm thick -5 kg's sq m	3660 x 1220 - 23 kg's (no grit)
20mm thick -10 kg's sq m	2m x 1m – 20 kg's
25mm thick -12 kg's sq m	2m x 1m - 24kgs, 3m x 1m - 36 kgs, 3660 x 1220 - 54 kg's
38mm thick -19 kg's sq m	2m x 1m 38 kgs, 3m x 1m - 57 kgs, 3660 x 1220 - 85 kg's
50mm thick - 22 kg's sq m	2m x 1m 44 kgs, 3660 x 1220 - 99 kg's
14mm mini mesh - 7 kg's sq m	3660 x 1220 - 32 kg's
30mm mini mesh - 17 kg's sq m	2m x 1m - 34 kg's
25mm solid top grating -18 kg's sq m	2m x 1m - 36 kg's
41mm solid top grating - 24 kg's sq m	2m x 1m – 48 kg's

(All the above weights include a grit finish except 12mm which is sanded)

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1.5mm gritted plate - 2.25 kg's sq m	2m x 1m - 4.5 kg's
4mm gritted plate - 6.25 kg's sq m	2m x 1m - 12.5 kg's, 2440 x 1220 – 18.75 kg's
6mm gritted plate - 8.5 kg's sq m	2m x 1m - 17 kg's
8mm gritted plate - 11.1 kg's sq m	2m x 1m - 22.2 kg's
10mm gritted plate - 13.5 kg's sq m	2m x 1m - 27 kgs, 2440 x 1220 – 40.5 kg's

Gritting adds approx 1.3 kg's sq m (included in the above figures)

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300 wide Tread cover	2.4 kg's per metre
275 wide Tread cover	2.3 kg's per metre
250 wide Tread cover	2.2 kg's per metre
225 wide Tread cover	2.1 kg's per metre
200 wide Tread cover	2.0 kg's per metre
70 x 30 nosing	0.8 kg's per metre

Anglia Composites Ltd. All figures quoted are approximate.