

TECHNICAL DATA SHEET

DuraDeck® Cover System



DuraGrat® Grating System

A manufacturer of quality fiberglass manufacturer since 1983, Yeungs has leading product and industry experience you can solidly depend on.

Engineers, architects, contractors and remodelers have trusted and specified DURAGRAT for years - and our reputation keeps earning us valuable customers like you.

DURAGRAT® molded fiberglass grating is the chemical resistant flooring choice for many industrial applications. The high resin content (65%) provides long maintenance-free performance.

FEATURES

The strong mesh grating panel allows efficient on-site cutting to minimize grating waste. Molded grating is significantly lighter in weight than metallic gratings.

Standard DURAGRAT® grating has a concave profile on the upper surface for skid resistance. Grit tops are available upon request.

MATERIAL OF CONSTRUCTION

Molded grating is composed of fiberglass rovings combined with a choice of five thermosetting resin systems.

VE-a premium grade vinyl ester, for high chemical resistance

Color: Orange or Dark Gray

XVE-a premium grade vinyl ester, with extra fire resistance (a flame spread rating of 10 or less)

Color: Dark Gray

PP-an all-purpose isophthalic polyester for industrial applications

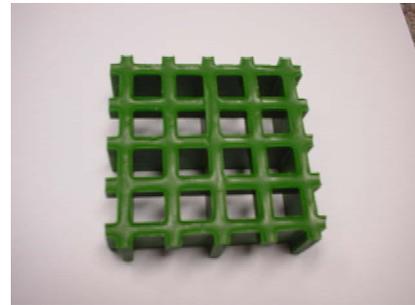
Color: Green or Yellow

GP-a general purpose orthophthalic polyester for architectural or other applications with less corrosion problems

Color: Yellow

FF-an economical isophthalic polyester for food processing or similar applications

Color: Gray

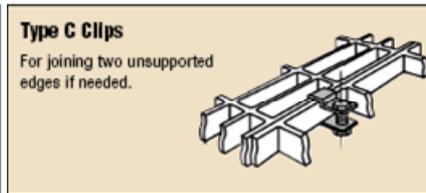
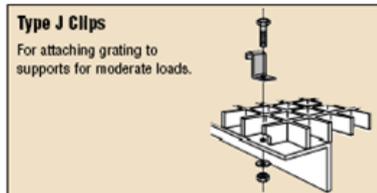
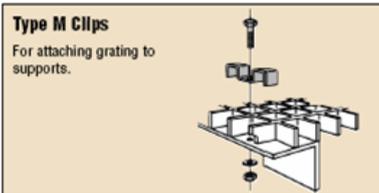


Top Elevation of GRP Grating (G-30B)



Bottom Elevation of GRP Grating (G-30B)

Panel Installation



ACCESSORIES

A standard line of accessories is available for installing DURAGRAT® molded fiberglass grating panels. Accessories include "M" type, "C" type or "J" type hold-down clips connectors.

SIZE AND AVAILABILITY

Grating Size and Specifications (Metric Units)						
Model No.	Height	Mesh Size	Bar Width	Full Panel Size (mm)	Surface Density (kg/m ²)	Weight (kg)
G-25	25 mm	25mm x 100mm	7.0 mm	1000 x 2000	11	22
G-30A	30 mm	38mm x 38mm	6.4 mm	1000 x 2000	14.5	29
				1000 x 3000		44
				1000 x 4000		58
G-30B	30 mm	20mm x 20mm Mini-Mesh	6.4 mm	1007 x 2007	15.8	32
				1007 x 3007		48
				1007 x 4007		65
G-38A	38 mm	38mm x 38mm	6.4 mm	1220 x 4000	18.3	82
G-38B	38 mm	20mm x 20mm Mini-Mesh	6.4 mm	1000 x 2000	18.8	38
				1000 x 3000		57
				1000 x 4000		77
G-50*	50 mm	38mm x 38mm	11.2 mm	1530 x 4004	34.3	210
G-63*	63 mm	38mm x 38mm	12.0 mm	1530 x 4004	42.5	260

* Heavy Duty Grating are customer manufactured upon special and extreme condition

MECHANICAL PROPERTIES

Tested to British Standards BS 2782

TEST DESCRIPTION	RESULT
Tensile Strength	171 N/mm ²
Elongation	1.8 %
Tensile Modulus	12600 N/mm ²
Compressive Strength	102 N/mm ²
Flexural Strength	250 N/mm ²
Flexural Modulus	12810 N/mm ²
Interlaminar Shear Strength	18.5 N/mm ²

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Sole Agent : YEUNG S FIBERGLASS COMPANY
Unit F, 23/FL., CNT Tower, 338 Hennessy Road, Wanchai, Hong Kong.
Tel. : (852) 2893 8865 Fax. (852) 2893 6321

<http://www.dura1.com>

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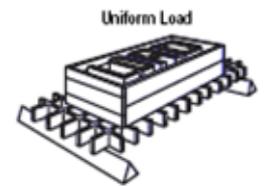
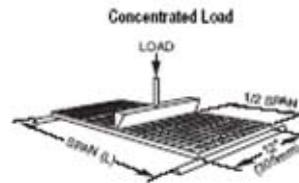
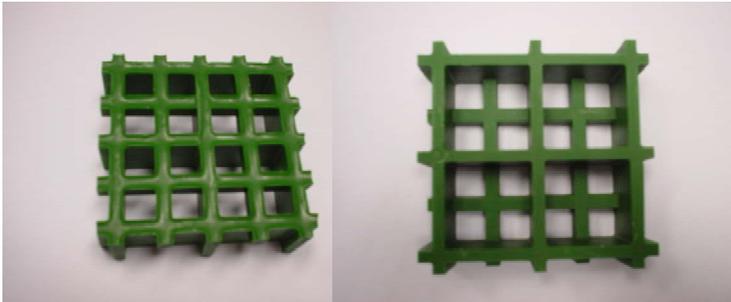
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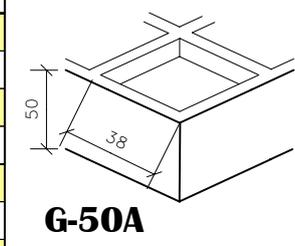
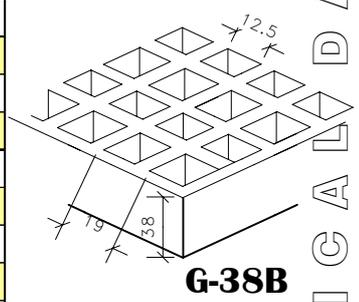
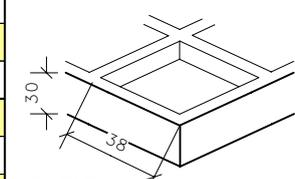
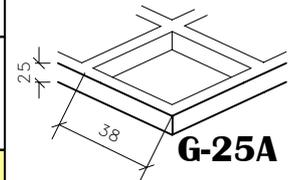
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LOAD AND DEFLECTION TABLE



LOAD AND DEFLECTION

Height	Span	Load	Load 1% Deflection in kg using 75mm x 300mm Block	Concentrated Load kg/m		Uniformly Distributed Load (UDL) in 1% deflection
				Load of 1% Deflection	Load of Failure in Flexure	
G-25	25 mm	250 mm	1170	3570	12900	-
		500 mm	340	890	4900	2810
		750 mm	185	400	3600	750
		1000 mm	140	230	2850	300
G-30A	30 mm	250 mm	-	4610	11980	-
		500 mm	840	1165	7020	5215
		750 mm	645	530	5180	1270
		1000 mm	310	280	3240	495
G-30B (Mini-mesh)	30 mm	500 mm	930	1165	7660	5675
		750 mm	500	530	5580	1350
		1000 mm	340	280	3540	540
G-38A	38 mm	250 mm	-	6980	17500	-
		500 mm	1370	1920	10110	9175
		750 mm	655	939	6100	2240
		1000 mm	450	500	4500	870
		1200 mm	395	326	3770	455
G-38B (Mini-mesh)	38 mm	500 mm	1500	2100	11120	9985
		750 mm	720	1030	6650	2430
		1000 mm	490	545	4900	950
		1200 mm	430	355	4000	495
G-63*	63 mm	1000 mm	4000	2690	12100	5900
		1200 mm	3100	1860	9500	2800
		1500 mm	2700	1190	8100	1900



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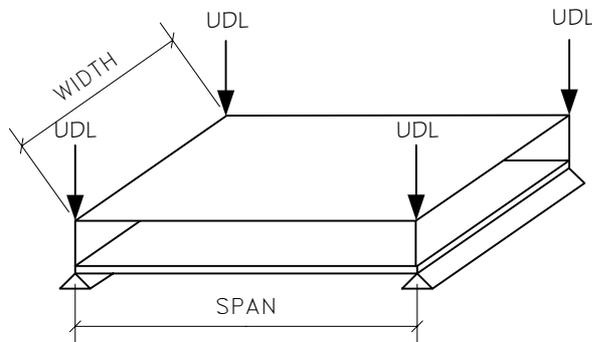




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LOAD AND DEFLECTION TABLE (For non-minimesh Cover)



Uniformed Distributed Loads (UDL) kN/m²

Mesh	G-25A (25mm Height) 38 x 38mm		G-38A (38mm Height) 38 x 38mm		G-50A (50mm Height) 38 x 38mm	
	UDL (kN/m ²)	Deflection (mm)	UDL (kN/m ²)	Deflection (mm)	UDL (kN/m ²)	Deflection (mm)
300	34.53	1.5	80.67	1.5	153.73	1.5
400	14.57	2.0	34.03	2.0	64.85	2.0
500	7.96	2.5	22.74	2.5	39.89	2.5
600	4.61	3.0	13.16	3.0	28.37	3.0
700	3.01	3.5	9.04	3.5	17.87	3.5
800	2.02	4.0	6.77	4.0	14.09	4.0
900	1.42	4.5	4.76	4.5	10.28	4.5
1000	-	-	3.47	5.0	7.46	5.0
1100	-	-	2.61	5.5	5.98	5.5
1200	-	-	2.14	6.0	4.60	6.0
1300	-	-	1.69	6.5	3.62	6.5
1400	-	-	1.35	7.0	2.90	7.0
1500	-	-	-	-	2.36	7.5
1600	-	-	-	-	1.94	8.0
1700	-	-	-	-	1.62	8.5
1800	-	-	-	-	1.36	9.0

Clear Span Deflection Limited to L / 200

1.50 kN/m ²	883 mm	1352 mm	1744 mm
3.00 kN/m ²	701 mm	1049 mm	1384 mm
5.00 kN/m ²	591 mm	902 mm	1167 mm
7.50 kN/m ²	517 mm	773 mm	1020 mm

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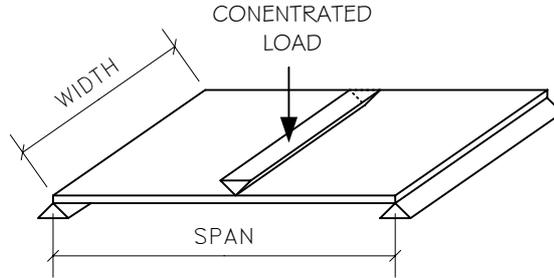


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LOAD AND DEFLECTION TABLE (For non-minimesh Cover)



Concentrated Load (kN/300mm width at mid-span)

Mesh	G-25A (25mm Height)		G-38A (38mm Height)		G-50A (50mm Height)	
	38 x 38mm		38 x 38mm		38 x 38mm	
Span (mm)	C/L (kN)	Deflection (mm)	C/L (kN)	Deflection (mm)	C/L (kN)	Deflection (mm)
300	6.47	1.5	15.13	1.5	28.82	1.5
400	3.64	2.0	8.51	2.0	16.21	2.0
500	2.49	2.5	7.11	2.5	12.47	2.5
600	1.73	3.0	4.94	3.0	10.64	3.0
700	1.32	3.5	3.95	3.5	7.82	3.5
800	1.01	4.0	3.39	4.0	7.05	4.0
900	0.80	4.5	2.68	4.5	5.78	4.5
1000	0.65	5.0	2.17	5.0	4.68	5.0
1100	0.53	5.5	1.79	5.5	4.11	5.5
1200	-	-	1.61	6.0	3.45	6.0
1300	-	-	1.37	6.5	2.94	6.5
1400	-	-	1.18	7.0	2.54	7.0
1500	-	-	1.03	7.5	2.21	7.5
1600	-	-	-	-	1.94	8.0
1700	-	-	-	-	1.72	8.5
1800	-	-	-	-	1.53	9.0

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Chemical Resistance & Corrosion Guide

Chemical Environment	ISO		VINYL ESTER		Chemical Environment	ISO		VINYL ESTER	
	%Concentration	TempF/°C	%Concentration	TempF/°C		%Concentration	TempF/°C	%Concentration	TempF/°C
Acetic Acid	50	125/50	50	185/85	Hydrocyanic Acid	ALL	150/65	ALL	185/85
Acetone	N/R	N/R	100	75/25	Hydrocyanic Peroxide	10	75/25	30	125/50
Alumium Salts	ALL	160/70	ALL	195/90	Hypochlorous	20	85/30	20	150/65
Ammonium Chloride	ALL	160/70	ALL	185/85	Lactic Acid	ALL	170/75	ALL	195/90
Ammonium Hydroxide	28	N/R	28	100/38	Lead Acetate	ALL	170/75	ALL	195/90
Ammonium Carbonate	N/R	N/R	ALL	150/65	Lead Chloride	ALL	140/60	ALL	195/90
Ammonium Bicarbonate	15	125/50	ALL	125/50	Lead Nitrate	ALL	150/65	ALL	195/90
Ammonium Nitrate	ALL	160/70	ALL	185/85	Lime Slurry	ALL	150/65	ALL	185/85
Benzene	N/R	N/R	100	140/60	Magnesium Salts	ALL	150/65	ALL	185/85
Benzene Sulfonic Acid	25	115/45	ALL	195/90	Maleic Acid	100	150/65	100	185/85
Benzene Acid	ALL	150/65	ALL	195/90	Mercury Chloride	100	150/65	100	185/85
Calcium Hydroxide	25	150/65	35	185/85	Nickel Salts	ALL	170/75	ALL	195/90
Calcium Hypochlorite	ALL	150/65	ALL	185/85	Nitric Acid	20	75/25	20	105/40
Calcium Salts	ALL	150/65	ALL	195/90	Perchloric Acid	N/R	N/R	30	85/30
Calcium Nitrate	ALL	185/85	ALL	195/90	Phosphoric Acid	100	125/50	100	195/90
Carbonic Acid	ALL	125/50	ALL	185/85	Potassium Salts	ALL	150/65	ALL	185/85
Carbon Tetrachloride	100	75/25	100	140/60	Phthalic Acid	-	-	ALL	185/85
Chlorine Dioxide	N/R	N/R	ALL	140/60	Silver Nitrate	100	150/65	100	185/85
Chlorine Water	ALL	75/25	ALL	125/50	Sodium Hypochlorite	N/R	N/R	10	105/65
Chromic Acid	10	140/60	10	185/85	Sodium Salts	ALL	75/25	ALL	105/40
Citric Acid	ALL	150/65	ALL	185/85	Stannic Chloride	ALL	160/70	ALL	195/90
Copper Cyanide Plating	ALL	125/50	ALL	185/85	Styrene	N/R	N/R	N/R	N/R
Copper Salts	ALL	150/65	ALL	185/85	Sulfuric Acid	50	N/R	50	185/85
Ethanol	50	75/25	50	85/30	Sulfuric Acid	25	75/25	25	195/90
Ethyl Acetate	N/R	N/R	N/R	N/R	Tartaric Acid	ALL	170/75	ALL	195/90
Ferric Chloride	100	150/65	100	185/85	Trisodium Phosphate	N/R	N/R	ALL	170/65
Ferric Salts	ALL	150/65	ALL	185/85	Urea	ALL	125/50	ALL	140/60
Glycerine	100	150/65	100	195/90	Vinegar	100	170/75	100	195/90
Heptane	100	105/40	100	125/50	Water, Distilled	100	170/75	100	195/90
Hydrobromic Acid	50	125/50	50	125/50	Water, Sea	ALL	170/75	100	195/90
Hydrobromic Acid	37	75/25	37	95/35	Zinc Salts	100	150/65	100	185/85

ALL - ALL Concentrations
SAT - Saturated Solution
N/R - Not Recommended
-- No Information Available

*The tested data from the suppliers of un polymerized resin shows that FRP Products are fit for all the above. It's hard to control in indifferent environments, so this form is for reference only.