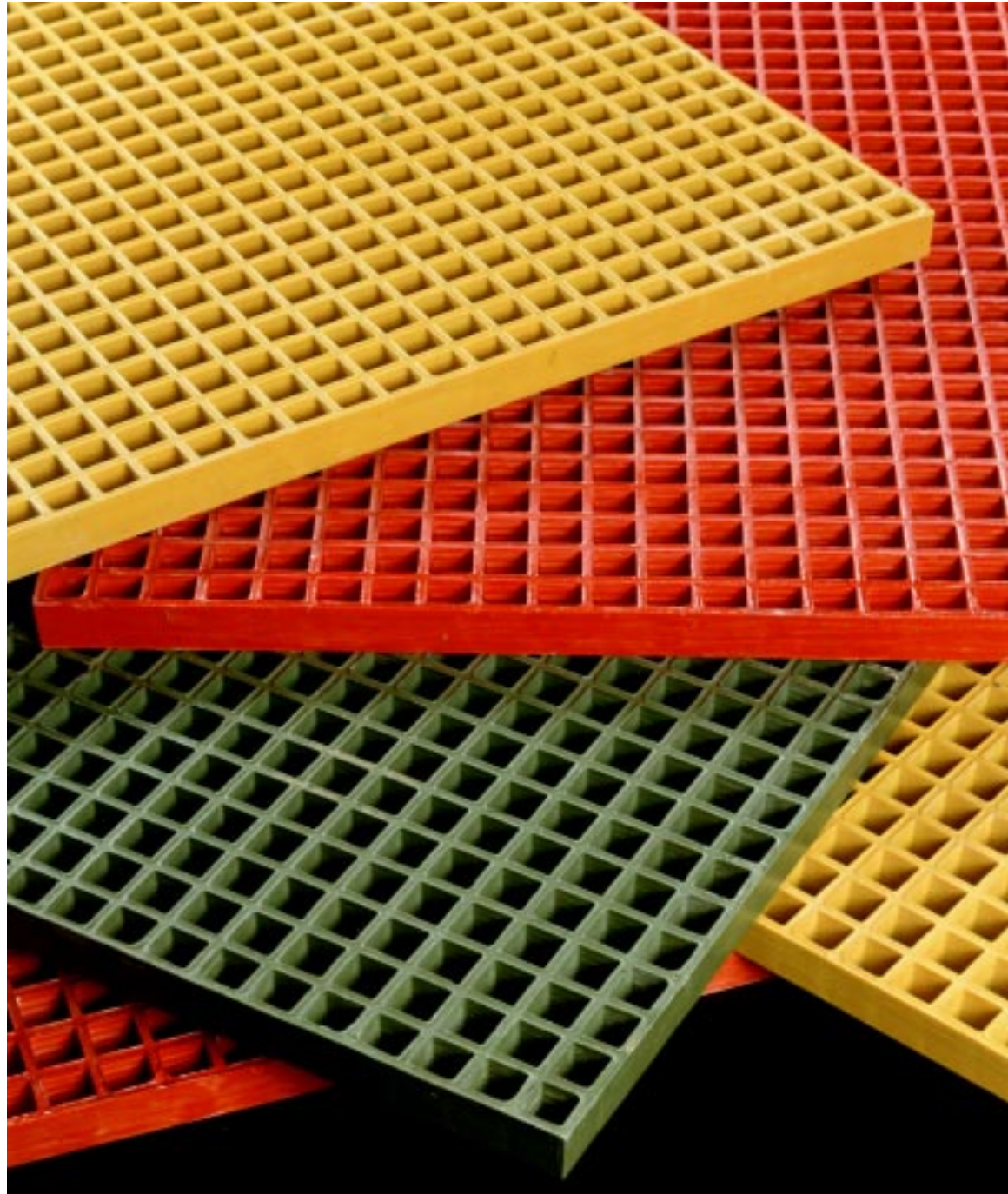


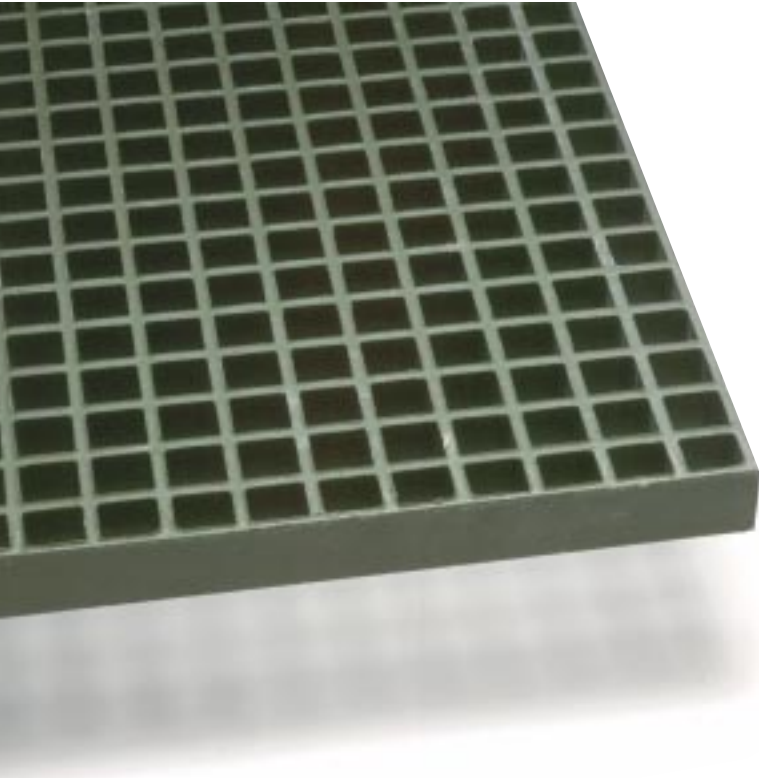
STRONGWELL

DURAGRATE[®]

MOLDED FIBERGLASS GRATING



Molded Fiberglass Grating



Features

DURAGRATE® molded fiberglass grating is a strong mesh grating panel which allows efficient on-site cutting to minimize grating waste. Molded in one piece with a plain concave non-slip walking surface, DURAGRATE® is the chemical resistant flooring choice for many industrial applications. Load bearing bars in both directions allow for use without continuous side support.

Molded fiberglass grating is significantly lighter in weight than metallic gratings. The high resin content (65%) provides long maintenance free performance. A higher safety factor is achieved by designing in a higher glass content at the bottom of the grating for greater tensile strength.

DURAGRATE® molded fiberglass grating has the following inherent features:

- Corrosion Resistant
- Fire Retardant
- Maintenance Free
- Lightweight
- Easy To Install
- Uniform Appearance
- Easy To Fabricate
- Impact Resistant
- Non-Conductive
- Bidirectional Load Bearing
- Cost Effective

Materials of Construction

DURAGRATE® molded fiberglass grating is composed of fiberglass rovings combined with a choice of five thermosetting resin systems.

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

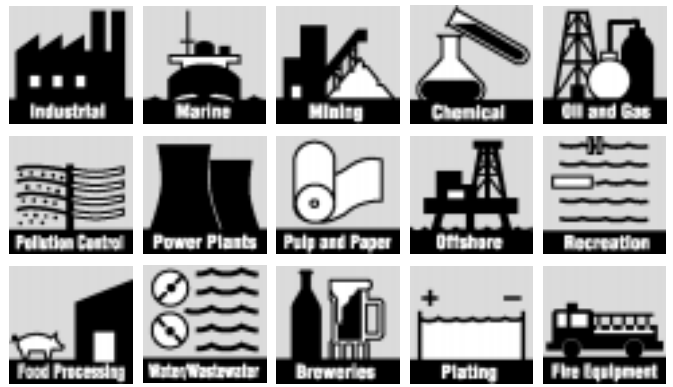


Standard Resin Systems Available

Resin Code	Description	Resin Base	Corrosion Resistance	Standard Color*	Flame Spread Rating**
VE	Chemical Proof Fire Retardant	Vinyl Ester	Excellent	Orange or Dark Gray	Class 1 25 or less
XVE	Chemical Proof Fire Retardant	Vinyl Ester	Excellent	Dark Gray	Class 1 10 or less
PP	Industrial Grade Fire Retardant	Isophthalic	Very Good	Green or Yellow	Class 1 25 or less
GP	Architectural Grade Fire Retardant	Orthophthalic	Good	Yellow	Class 1 25 or less
FF	Food Grade Fire Retardant	Isophthalic	Very Good	Light Gray	Class 2 30 or less

*Custom Colors Available Upon Request.

** Flame Spread Rating per ASTM E-84 Tunnel Test



Technical Data

Shapes, Sizes and Availability

Typical DURAGRATE® Panels

Tolerances: $\pm 1/8"$ ($\pm 3\text{mm}$) length and width
 $\pm 1/16"$ ($\pm 1.6\text{mm}$) thickness

THICKNESS	MESH PATTERN	PANEL SIZES
1"	1-1/2" Square	3' x 10', 4' x 8', 4' x 12'
1"	1" x 4" Rectangular	3' x 10', 44" x 8', 4' x 8', 4' x 12'
1-1/2"	1-1/2" Square	3' x 10', 4' x 8', 4' x 12', 5' x 10'
2"	2" Square	4' x 12'

NOTE: All panel sizes available in VE, XVE, PP, GP or FF resin systems. Custom panel sizes and resins available upon request.

How to Specify

The molded fiberglass grating shall be DURAGRATE® as supplied by Strongwell, Chatfield, Minnesota. Grating panels shall be (pick one from chart for thickness, mesh pattern, resin code) molded grid pattern. The grating shall be one piece construction with the tops of the bearing bars and cross bars in the same plane. Color shall be (green) (orange) (yellow) (dark gray) (light gray). Surface shall be (concave top) (gritted).

Stair Treads

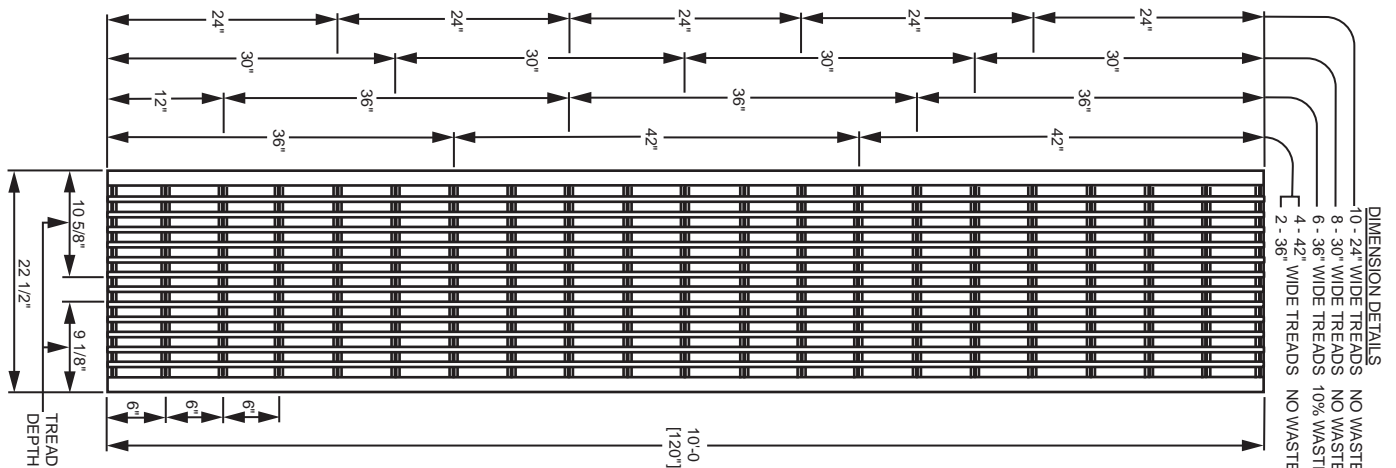
DURAGRATE® molded fiberglass stairtreads are available in a 1-1/2" thick 1-1/2" x 6" rectangular mesh pattern. The standard panel size is 22-1/2" x 10'. Stairtreads can be produced in any of the standard DURAGRATE® resin systems. The stairtread panel comes complete with anti-slip nosing.

Load Table

DURAGRATE® STAIRTREAD

Thickness	Mesh	Panel Size	Maximum Span for 300 lbs. at MidSpan		Panel Weight	Open Area
			1/8" or less deflection	1/4" or less deflection		
1-1/2"	1-1/2" x 6"	22-1/2" x 10'	31"	38"	60 lbs.	67%

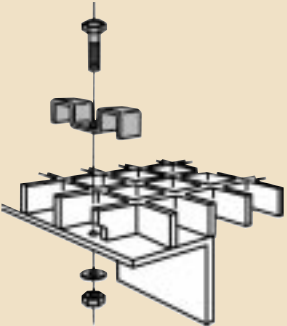
Stairtread Panel Cutting Diagram



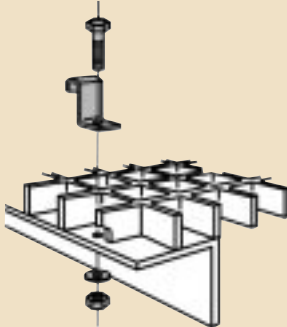
Accessories

Panel Installation

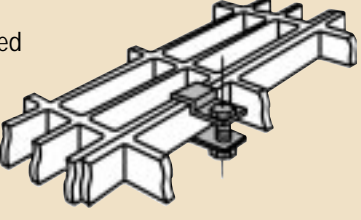
Type M Clips
For attaching grating to supports.



Type J Clips
For attaching grating to supports for moderate loads.



Type C Clips
For joining two unsupported edges if needed.



Sealing Kits

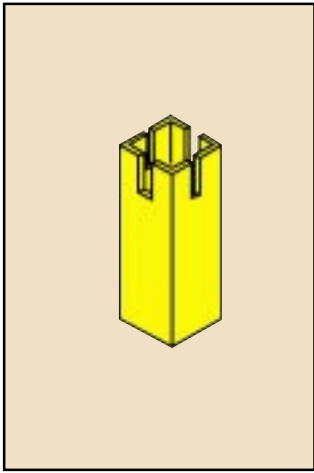
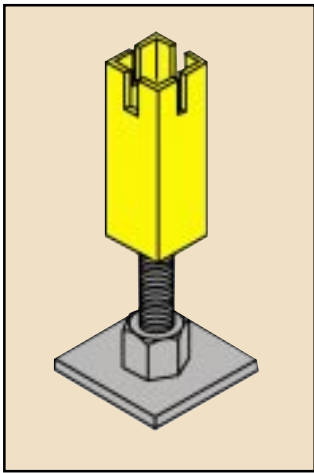
To maintain corrosion resistance and structural integrity, standard resin sealing kits are available to protect the exposed ends of cut panels and other components.

Solid Surface

DURAGRATE® is available with an integral cover bonded to the top surface with a slip resistant grit surface.

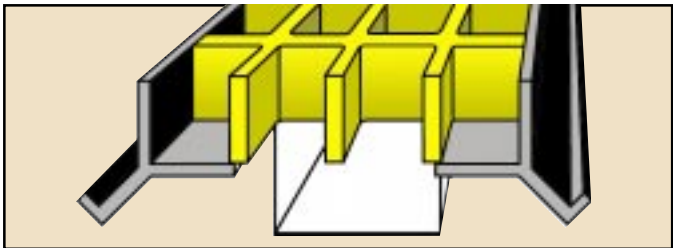
Elevated Floor System

Fixed and adjustable legs for molded grating are available to provide sturdy support for elevated flooring. Contact Strongwell with your exact requirements.



Curb Angle

Fiberglass Curb Angle provides a strong, firm base for bearing bars and is pultruded from the same material and in the same manner as other DURADEK®/DURAGRID® products. Corrosion resistant, non-conducting Curb Angle is available in three sizes, gray, fire retardant vinyl ester.

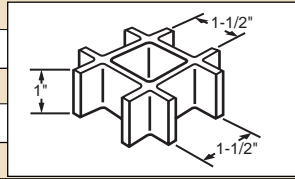


Load Tables

1" THICK 1-1/2" SQUARE MESH DURAGRATE®

A=1.71 in.²/ft. of width S=0.29 in.³/ft. of width I=0.14 in.⁴/ft. of width
 No. Bars per foot = 8 Open Space = 70% Approx. Weight = 2.6 lbs/sq. ft.

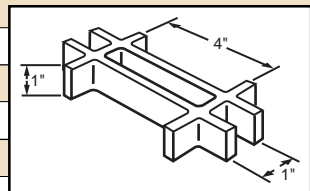
SPAN INCHES		200	400	600	800	1000		MAX. SAFE LOAD
12"	u	.200	.400	.600	.800	1.000		3,400
	Δu	.017	.034	.051	.068	.085		.288
	c	100	200	300	400	500		1,700
	Δc	.014	.027	.041	.054	.068		.230
18"	u	.133	.267	.400	.533			1,650
	Δu	.055	.111	.166	.221			.685
	c	100	200	300	400			1,250
	Δc	.044	.089	.133	.177			.548
24"	u	100	200	300				950
	Δu	.125	.257	.386				1,221
	c	100	200	300				950
	Δc	.106	.206	.309				.877
30"	u	80	160					600
	Δu	.249	.497					1.85
	c	100	200					750
	Δc	.311	.398					1.482
36"	u	67	133					400
	Δu	.426	.845					2,540
	c	100	200					600
	Δc	.340	.676					2,032



1" THICK 1" x 4" RECTANGULAR MESH DURAGRATE®

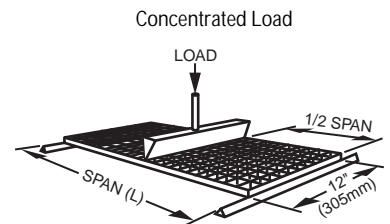
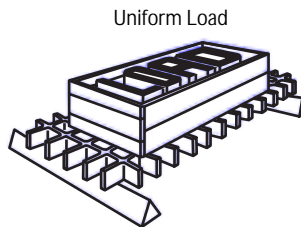
A=2.57 in.²/ft. of width S=0.43 in.³/ft. of width I=0.22 in.⁴/ft. of width
 No. Bars per foot = 12 Open Space = 69% Approx. Weight = 2.8 lbs/sq.ft.

SPAN INCHES		200	400	600	800	1000	1200		MAX. SAFE LOAD
12"	u	.200	.400	.600	.800	1.000	1.200		4,900
	Δu	.011	.022	.033	.044	.055	.066		.271
	c	100	200	300	400	500	600		2,450
	Δc	.009	.018	.027	.035	.044	.053		.217
18"	u	.133	.267	.400	.533	.667			2,400
	Δu	.033	.066	.100	.131	.164			.592
	c	100	200	300	400	500			1,800
	Δc	.026	.053	.080	.105	.132			.473
24"	u	100	200	300	400				1,400
	Δu	.074	.149	.223	.298				1.041
	c	100	200	300	400				1,400
	Δc	.060	.119	.179	.238				.833
30"	u	80	160	240					850
	Δu	.139	.278	.417					1.476
	c	100	200	300					1,050
	Δc	.111	.222	.334					1.181
36"	u	67	133						600
	Δu	.236	.469						2.115
	c	100	200						900
	Δc	.188	.376						1.692
42"	u	57	114						450
	Δu	.365	.729						2.877
	c	100	200						800
	Δc	.292	.583						2.302



c IS CONCENTRATED LOAD LBS/FT OF WIDTH
 Δc IS DEFLECTION UNDER CONCENTRATED LOAD
 u IS UNIFORM LOAD LBS/FT²
 Δu IS DEFLECTION UNDER UNIFORM LOAD

NOTE: ALL TABLE VALUES ARE TYPICAL

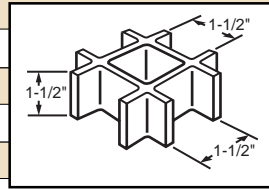


Load Tables

1-1/2" THICK 1-1/2" SQUARE MESH DURAGRATE®

A=2.85 in.²/ft. of width S=0.65 in.³/ft. of width I=0.51 in.⁴/ft. of width
 No. Bars per foot = 8 Open Space = 70% Approx. Weight = 3.8 lbs/sq.ft.

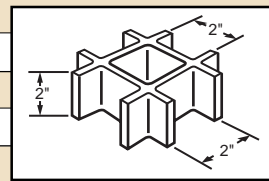
SPAN INCHES								MAX. SAFE LOAD
12"	u	200	400	600	800	1000		5,200
	Δu	.007	.014	.021	.029	.036		.181
	c	100	200	300	400	500		3,900
18"	Δc	.006	.011	.017	.023	.029		.222
	u	133	267	400	533	666		3,450
	Δu	.019	.038	.057	.076	.096		.493
24"	c	100	200	300	400	500		2,600
	Δc	.015	.031	.046	.061	.076		.394
	u	100	200	300	400	400		1,950
30"	Δu	.042	.084	.126	.168			.279
	c	100	200	300	400			1,950
	Δc	.034	.067	.101	.135			.223
36"	u	80	160	240	320			1,240
	Δu	.075	.151	.226	.301			1.168
	c	100	200	300	400			1,550
42"	Δc	.060	.121	.181	.241			.934
	u	67	133	200				850
	Δu	.129	.256	.384				1.632
48"	c	100	200	300				1,300
	Δc	.103	.205	.307				1.306
	u	57	114	170				625
36"	Δu	.201	.402	.600				2.204
	c	100	200	300				1,100
	Δc	.161	.321	.480				1.763
42"	u	50	100					425
	Δu	.287	.573					2.435
	c	100	200					850
48"	Δc	.230	.459					1.948



2" THICK 2" SQUARE MESH DURAGRATE®

A=2.88 in.²/ft. of width S=0.94 in.³/ft. of width I=0.96 in.⁴/ft. of width
 No. Bars per foot = 6 Open Space = 72% Approx. Weight = 4.0 lbs/sq.ft.

SPAN INCHES								MAX. SAFE LOAD
12"	u	200	400	600	800	1000	1200	4,800
	Δu	.004	.008	.012	.016	.021	.025	.098
	c	100	200	300	400	500	600	2,400
18"	Δc	.003	.007	.010	.013	.016	.020	.078
	u	133	267	400	533	666	800	3,200
	Δu	.011	.021	.032	.043	.053	.064	.257
24"	c	100	200	300	400	500	600	2,400
	Δc	.009	.017	.026	.034	.043	.051	.205
	u	100	200	300	400	500		2,400
30"	Δu	.021	.042	.063	.083	.104		.500
	c	100	200	300	400	500		2,400
	Δc	.017	.033	.050	.067	.083		.400
36"	u	80	160	240	320	625		1,600
	Δu	.037	.073	.110	.147	.286		.732
	c	100	200	300	400	500		2,000
42"	Δc	.029	.059	.088	.117	.229		.586
	u	67	133	200	267			1,150
	Δu	.058	.115	.173	.232			.997
48"	c	100	200	300	400			1,700
	Δc	.047	.092	.139	.185			.798
	u	57	114	170				850
54"	Δu	.091	.181	.271				1.353
	c	100	200	300				1,450
	Δc	.073	.145	.216				1.082
48"	u	50	100	150				650
	Δu	.135	.269	.404				1.749
	c	100	200	300				1,300
54"	Δc	.108	.215	.323				1,400
	u	44	89					500
	Δu	.188	.380					2.136
54"	c	100	200					1,150
	Δc	.150	.304					1.709



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