

 Centurion™ MOLDED GRATING

...TESTED TOUGH™



**Century Composites LLC**

# Century Composites LLC



In 1989, we started a company with a simple idea:  
*Take care of our customers and they will take care of us.*

Eighteen years later, our simple idea has proven to be a very good business plan. The business has grown dramatically and an ever-increasing number of customers rely on us to supply their components for industrial applications. We want to express our heartfelt gratitude to our customers. We enjoy your partnership and appreciate that you have trusted us with your business needs.

We invite our future customers to contact us to experience our commitment to quality products, helpful service, and reliable supply.

Sincerely,

William Drury, PhD.  
Founder

Charles Li, PhD.  
Founder

## Why Choose Century Composites?

- Complete line of industrial components
- Commitment to quality with proven results
- 24-hour shipping from stock; ideal for lean /JIT operations
- Helpful & experienced customer service



## MOLDED FIBERGLASS GRATING

**CENTURION™ Molded Grating** is a hand lay-up composite of resin and continuous glass fiber strand that is thoroughly wetted out and woven through an open mold. This methods provides CENTURION™ Molded Grating with **Good Strength** and **High Corrosion Resistance**.

CENTURION™ Molded Grating is an excellent alternative to metal grating where rust, corrosion, or chemical attack are problems. With proper resin selection, CENTURION™ Molded Grating is an economical option in a wide range of corrosive environments.

### APPLICATIONS OF MOLDED GRATING

CENTURION™ Molded Grating is a candidate material where there are safety concerns due to the presence of liquids and oils on the floor as well as corrosive environments where chemical resistance of the flooring material is important for long term durability. Applications for CENTURION™ Molded Grating include:

- Walkways
- Platforms
- Protective Shielding
- Machinery Housings
- Raised Floors
- Stairways



### INDUSTRIES USING CENTURION™ MOLDED GRATING INCLUDE:

- Bottling Lines
- Food Processing Plants
- Waste Water Treatment Plants
- Lift Stations
- Commercial Aquariums
- Offshore Platforms
- Lube Oil Facilities
- Beverage Canning Facilities
- Plating Shops
- Chemical Plants
- Pulp and Paper Plants

## RESIN OPTIONS FOR CENTURION™ MOLDED FIBERGLASS GRATING

CENTURION™ Molded Grating is available in many resin systems, allowing the end user to make an economical selection for a specific application.

### RESIN SYSTEMS AVAILABLE:

#### GENERAL PURPOSE (ORTHOPHTHALIC POLYESTER):

An economical general purpose resin system for grating applications requiring good strength with minimal contact with harsh chemicals.

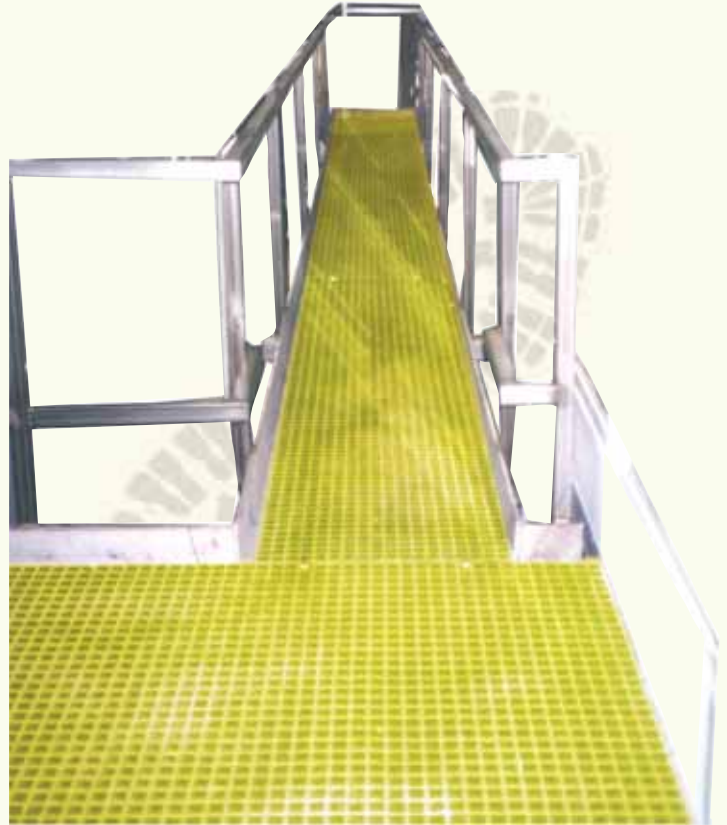
**ISO (ISOPHTHALIC POLYESTER):** A resin system offering an intermediate level of chemical resistance in moderately corrosive environments. A recommended material for applications involving splash or spill contact with chemicals.

**VINYL ESTER:** Provides the maximum level of corrosion resistance to aggressive chemical environments. Use in applications where contact with harsh chemicals, caustics or bleach is frequent.

**FIRE RETARDANT:** All Standard Resin Systems noted above are fire retardant to a Class I flame spread of 25 or less based on ASTM E-84 Testing. Verification of testing is available if needed.

**USDA CERTIFIED:** The General Purpose and ISO resin systems can be formulated in such fashion to be certified under USDA requirements. Certification by an independent laboratory is available if required. This special formulation is fire retardant, but does not meet Class I requirements.

**UV RESISTANCE:** All of our grating has a UV additive to limit degradation from outside exposure.



### MATERIAL PROPERTIES

- Flame Retardant (ASTM E-84) – Class I
- Most Resins Corrosion Resistant
- Electrically Non-Conductive
- Impact Resistant
- Low Thermal Conductivity

## STYLES, SURFACES AND COLORS FOR CENTURION™ MOLDED GRATING



— 1" (1"x4")



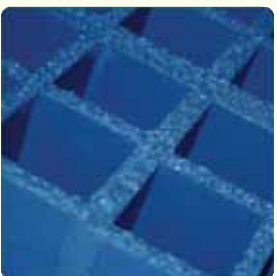
— 1" (1.5"x1.5")



— 1.5" (1.5"x1.5")



— 1.5" (1.5"x6")



— 2" (2"x2")

CENTURION™ Molded Grating is available in a wide range of surfaces, colors and styles (mesh pattern, thickness and panel size). There is a selection of CENTURION™ Molded Grating for almost any structural application!

### MESH PATTERNS AND THICKNESS

Different patterns and thicknesses provide different strength and performance properties for CENTURION™ Molded Grating. From 1-inch thick 1x4 rectangular mesh for light duty applications to 2-inch thick 2x2 square mesh for the heaviest loads, CENTURION™ Molded Grating is suitable for a wide range of industrial applications. Refer to the load charts that follow for more information.

- Available in 6 standard mesh patterns
- Specialty grates including Stairtread available
- Available with embedded grit or meniscus top
- Permanent colors for low maintenance
- Standard Panel Sizes: 4'x12' 3'x10' 5'x10'
- Custom panel sizes, thicknesses, and mesh patterns available upon request

### SURFACE STYLES

CENTURION™ Molded Grating comes with two types of non-slip surfaces.

- Meniscus top for normal applications
- Gritted top for applications where maximum wear resistance and skid resistance is required. CENTURION™ grit is embedded in the resin layer - not glued on - for greater durability.

### COLORS

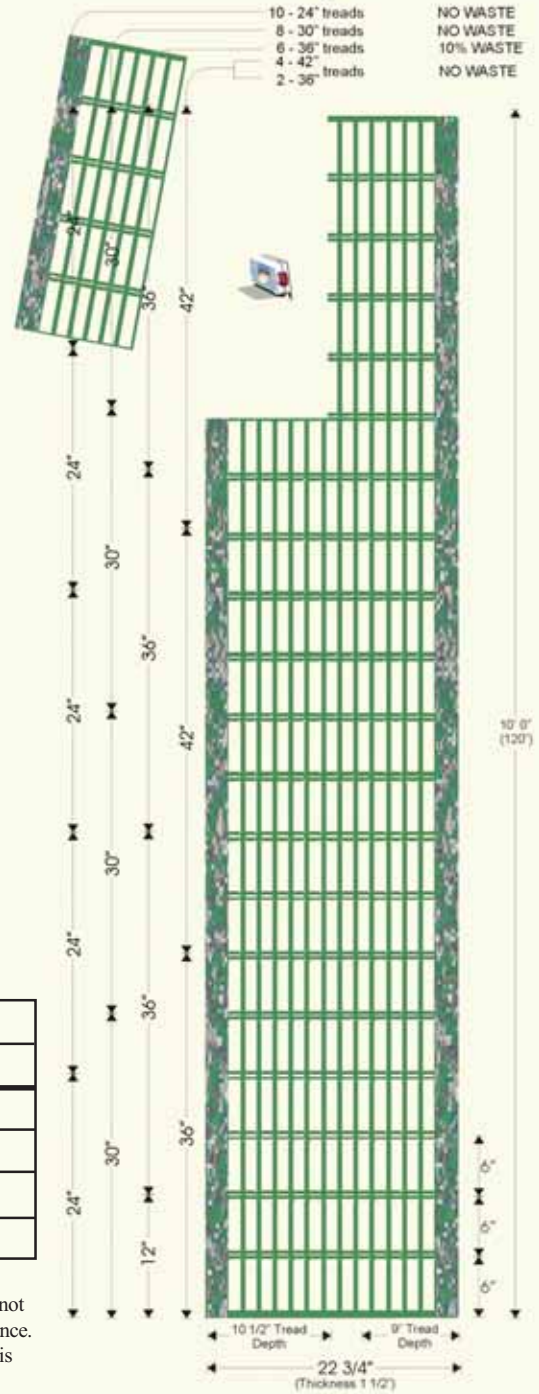
CENTURION™ Molded Grating is available in a variety of industry standard colors. Custom colors can be produced upon request.

**STAIR TREAD PANELS**

CENTURION™ Molded STAIR TREAD PANELS are now available! Stair tread geometry is conveniently designed for cutting common stair step sizes with little or no waste material. Cutting guide channels are provided at 6-inch intervals for quick error-free sizing of stair steps. In addition to superior corrosion resistance, CENTURION™ StairTreads provide strength, durability, and ease of fabrication and maintenance for an economical and practical structural product.

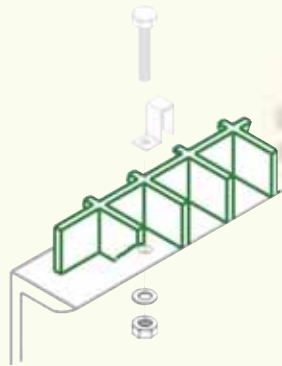


- Non-slip gritted top surface
- Flame retardant (ASTM E-84)
- Corrosion resistant
- Non-conducting
- Impact resistant
- Low thermal conductivity
- Permanent colors for low maintenance



**PANEL GEOMETRY:**

Stair Tread panel size: 120" x 22.75"  
Stair Tread thickness: 1.5"  
Stair Tread bearing bar spacing: 1.5"  
Stair Tread cutting guide spacing: 6.0"



**COMMON STAIR STEP CUTS:**

- |                    |                                      |
|--------------------|--------------------------------------|
| 24" Wide Steps:    | 10 Stair Steps / Stair Tread Panel** |
| 30" Wide Steps:    | 8 Stair Steps / Stair Tread Panel**  |
| 36" Wide Steps:    | 6 Stair Steps / Stair Tread Panel    |
| 42-54" Wide Steps: | 4 Stair Steps / Stair Tread Panel    |
| 60" Wide Steps:    | 4 Stair Steps / Stair Tread Panel**  |

\*\* No Waste Material

**TYPICAL DEFLECTION PROPERTIES:**

Properties based on concentrated load deflection applied at the midpoint of the tread, centered on the nosing to simulate a footfall.

SPAN (Inch)	LOAD (IBS)	
	250	500
18	0.03	0.06
24	0.05	0.10
36	0.16	0.32
48	0.41	1.24

This information is provided as a guide to the use and application of CENTURION™ grating and is not or does not represent a specific warranty of the product or its performance. The designer or user must determine the suitability of this product for a specific application.



## STAIR TREAD COVERS

CENTURION™ Tread Covers are the economical answer for restoring worn stair treads or where slippery stairs present possible safety concerns. Tread Covers are available in different resin systems for a wide range of industrial, commercial and residential applications. Central wear areas or full stair treads can be covered by cutting the tread cover to the appropriate length and width.

(IMPORTANT NOTE: Tread Covers need to be mechanically fastened to existing stair treads – do not use Tread Covers as an unsupported stair tread).

- CENTURION™ Tread Covers are designed to be fastened over existing stairtreads that have become slippery and unsafe
- Tread Covers are produced to exacting requirements resulting in a superior void-free laminate and with embedded oxide grit surface
- Molded in color is safety yellow throughout.
- Tread color is black
- Fine grit for residential/commercial applications and coarse grit for industrial applications
- Tread covers are fire retardant and offered in 3 resin systems:

- Polyester - General Purpose
- Isophthalic
- Vinyl Ester



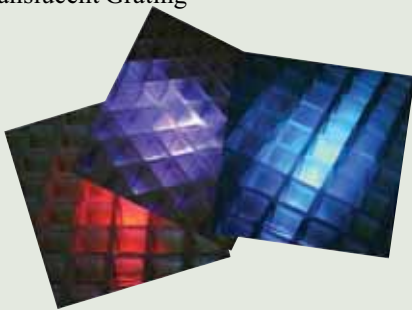
This information is provided as a guide to the use and application of CENTURION™ Tread Covers and is not or does not represent a specific warranty of the product or its performance. The designer or user must determine the suitability of this product for a specific application.

## CUSTOM GRATING

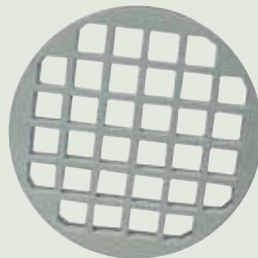
Century Composites has the ability to manufacture CENTURION™ Molded Grating in a wide range of custom shapes, sizes and styles, including:

- CUSTOM SIZES
- CUSTOM SHAPES
- CUSTOM PATTERNS
- CUSTOM COMPOSITES
- CUSTOM COLORS

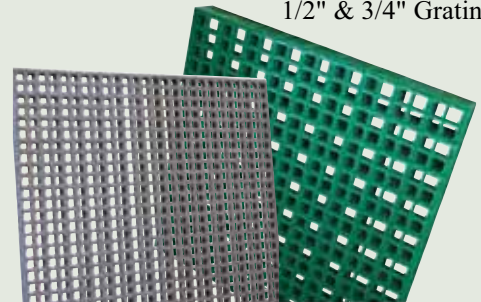
Translucent Grating



Drain Grate



1/2" & 3/4" Grating



Please contact us with your needs for custom or standard grating products. Your representative at Century Composites will be happy to discuss the custom manufacturing program with you.



### LOOSE PLATE TOP

CENTURION™ Loose Plate Top is for applications requiring good corrosion resistance and a barrier to air flow, particulate, or other debris. Plate Top can even be used to keep tools from falling through flooring or walkways.

Characteristics of CENTURION™ Loose Plate Top include:

- Embedded grit surface for slip resistance
- Available in thicknesses from 1/8" to 1/2"
- Available in all resin systems for optimum corrosion resistance
- Can be molded or adhesively bonded to molded grating

### PLATE TOP GRATING

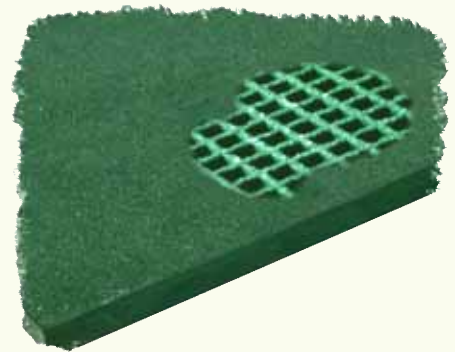
CENTURION™ Molded Fiberglass is also available as Plate Top Grating. Sheets of Plate Top are molded directly onto panels of open mesh grating – the result is an integral structure with no weak points at glue joints.

Plate Top Grating is perfect for applications requiring the solid surface of plate top along with the strength, rigidity and durability of regular CENTURION™ Molded Grating.

Standard Plate Top Grating configurations are:

1/8" plate molded to 4'x12'x1.5" thick (1.5" x 1.5" mesh) panels

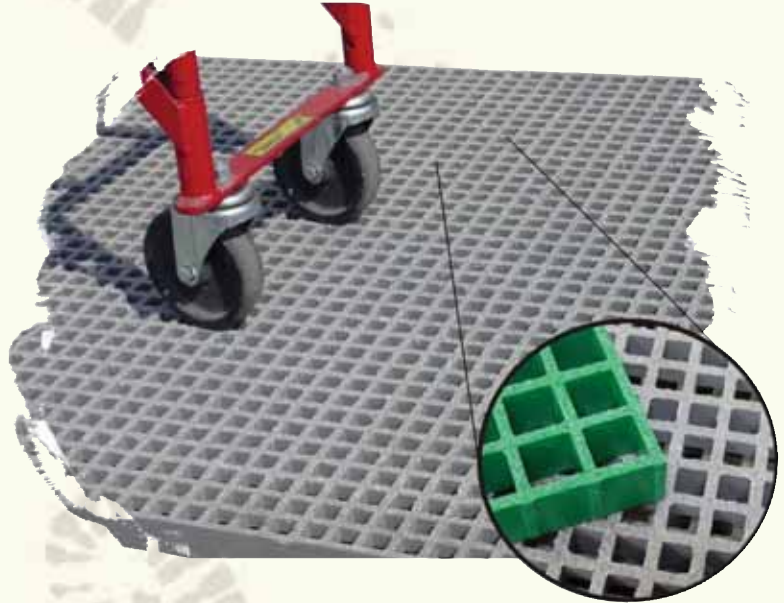
Custom sizes and styles are available upon request.



### MAX-MESH GRATING

The first reasonably priced maximum surface open-mesh fiberglass grating. This limited open grating can be used where open grating is preferred, but where cart traffic is common. It can accommodate high ventilation areas such as clean rooms.

- Major bearing bar spacing: 2" x 2" pattern
- All bar spacing: 1" x 1" pattern
- Openings: 3/4" x 3/4"
- Full height: 1-1/4"
- Panel size: 4' x 12'
- Panel weight: 129 lbs
- Surfaces: embedded grit, meniscus, smooth
- Bar thickness: 1/4"



### CENTURION™ CLIPS: HOLD-DOWN GUIDELINES FOR MOLDED FIBERGLASS GRATING

Fiberglass grating properly installed will be fastened down with clips that are of similar corrosion resistance and designed to avoid the creation of tripping hazards.

#### CENTURION™ CLIP APPLICATION GUIDELINES:

Clips should be used in sufficient quantity to firmly hold each piece of grating in place. It is recommended that at least eight (8) clips be used on a 4' x 12' panel, and that small pieces of grating be fastened with no fewer than four (4) clips.

Grating clips are specifically designed for use with molded fiberglass grating in heights of 1", 1-1/2", and 2".

In all cases, fasteners should have low profile heads to help eliminate any trip hazards.

Use of 1/8" to 3/16" spacing between panels is normal to allow for thermal expansion of the grating panels.

For stairtreads, it is recommended that at least four (4) "M" type clips be used on each tread, and that treads be supported by clip angles and not bolted directly to the stringers.

This information is provided as a guide to the use and application of CENTURION™ Clips and is not or does not represent a specific warranty of the product or its performance. The designer or user must determine the suitability of this product for a specific application.



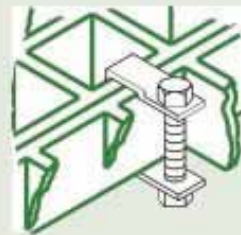
G-CLIP



J-CLIP



M-CLIP



Note: Each installation is different, and sufficient clips should be used to securely fasten the grating to the supports.

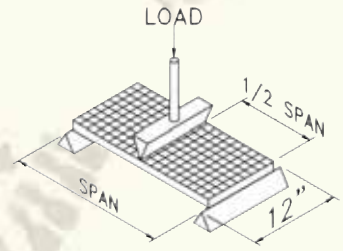
#### CENTURION™ CLIPS ARE:

- Made exclusively of **316 Stainless Steel**
- The "M" and "J" clips have a minimum of 1/4" opening for fasteners or anchors of your choice.
- The "G" clip which is used to hold two panels together comes with a 1/4" hex head bolt and welded nut for easy installation.

**INSTALLATION NOTES**

The following tables have been developed based on two sided supports layouts. Caution is needed to be sure that the rectangular grating is installed with bearing bars running from support to support. All grating should be fastened to the supports using fasteners such as the CENTURION™ Clips described in this brochure. These should be used every 3' x 4' along the supports, with a minimum of four clips on small sections. The clips not only add safety for the employees using the grating, but also improve on the deflection noted below.

**CONCENTRATED LOAD (12" STRIP):**  
REFLECTS THE DEFLECTION ACHIEVED USING A 12" WIDE STRIP OF GRATING TESTED AT THE MID-POINT OF VARYING SPANS.



**CONCENTRATED LOAD (12" STRIP)**

CENTURION™ GRATING:		SPAN	MAX LOAD(LB/SF)		LOAD (LB)				
1" THICK (1.5" x 1.5" SQUARE MESH)		INCH	NORMAL	FIRM	100	200	500	1000	2000
Provides one inch thick grating with the fabrication advantages of the square mesh pattern. Good for flooring, machine housings, fabrications and similar applications requiring strength in both length and width directions.	Center-Center: 1.5" x 1.5"	12	2640	1758	0.014	0.029	0.070	0.143	0.284
	Bar Height: 1.0"	18	871	573	0.047	0.092	0.219	0.429	*
	Tie Bar Width: 0.25"	24	414	279	0.093	0.177	0.454	*	*
	Bearing Bar Width: 0.25"	36	125	83	0.300	*	*	*	*
	Open Area: 69%	48	92	60	*	*	*	*	*
	Panel Wt (Men./Grit): 130/150 lbs Wt/sf (Men./Grit): 2.7/3.1 lbs/sf								
CENTURION™ GRATING:		SPAN	MAX LOAD(LB/SF)		LOAD (LB)				
1" THICK (1" x 4" RECTANGULAR MESH)		INCH	NORMAL	FIRM	100	200	500	1000	2000
A heavy duty thick grating. Bearing bars are thicker than other 1" x 4" pattern grating for greater load capacity and improved resistance to mechanical damage. The bearing bars run in the width dimension.	Center-Center: 1.0" x 4.0"	12	>3000	>3000	*	0.015	0.036	0.072	0.143
	Bar Height: 1.0"	18	1700	1132	0.022	0.044	0.110	0.221	0.441
	Tie Bar Width: 0.6875"	24	751	500	0.050	0.100	0.250	0.499	*
	Bearing Bar Width: 0.3750"	36	211	140	0.178	0.356	*	*	*
	Open Area: 52%	48	132	88	0.281	*	*	*	*
	Panel Wt (Men./Grit): 175/200 lbs Wt/sf (Men./Grit): 3.6/4.2 lbs/sf								
CENTURION™ GRATING:		SPAN	MAX LOAD(LB/SF)		LOAD (LB)				
1-1/4" THICK (1" x 1" SQUARE MESH)		INCH	NORMAL	FIRM	100	200	500	1000	2000
Specifically designed for maximum stiffness and strength without excessive weight. The square mesh pattern also means efficient panel utilization and ability to handle loads in both directions. Ideal for longer spans or heavier loads.	Center-Center: 1" x 1"	12	>3000	>3000	*	0.017	0.04	0.08	0.15
	Major Bar Height: 1-1/4"	18	2168	1445	0.016	0.036	0.075	0.16	0.346
	Minor Bar Height: 0.375"	24	1096	731	0.041	0.075	0.169	0.342	0.725
	Bar Width: 0.25"	36	368	245	0.10	0.20	0.51	1.08	2.33
	Open Area: 56%	48	156	104	0.24	0.48	*	*	*
	Panel Wt (Men./Grit): 180/195 lbs Wt/sf (Men./Grit): 3.8/4.0 lbs/sf								
CENTURION™ GRATING:		SPAN	MAX LOAD(LB/SF)		LOAD (LB)				
1.5" THICK (1.5" x 1.5" SQUARE MESH)		INCH	NORMAL	FIRM	100	200	500	1000	2000
The industry standard in both thickness and pattern. The square mesh pattern provides strength in both directions for more efficient utilization and easier fabrication. Panel sizes can be up to 5' x 13'.	Center-Center: 1.5" x 1.5"	12	>3000	>3000	*	0.015	0.029	0.053	0.114
	Bar Height: 1.5"	18	3000	2100	0.013	0.028	0.059	0.119	0.238
	Tie Bar Width: 0.3125"	24	1493	984	0.033	0.059	0.133	0.254	0.499
	Bearing Bar Width: 0.3125"	36	468	314	0.080	0.157	0.401	*	*
	Open Area: 63%	48	199	131	0.192	0.377	*	*	*
	Panel Wt (Men./Grit): 187/215 lbs Wt/sf (Men./Grit): 3.9/4.5 lbs/sf								
CENTURION™ GRATING:		SPAN	MAX LOAD(LB/SF)		LOAD (LB)				
1.5" THICK (1.5" x 6" RECTANGULAR MESH)		INCH	NORMAL	FIRM	100	200	500	1000	2000
A unique pattern of standard of thickness is the rectangular mesh with bearing bars running length-wise for efficient fabrication and utilization. As a result of thicker bearing bars, the stiffness of the panel is also improved.	Center-Center: 1.5" x 6.0"	12	>3000	>3000	*	*	0.019	0.039	0.078
	Bar Height: 1.5"	18	>3000	2513	0.010	0.020	0.050	0.099	0.199
	Tie Bar Width: 0.5625"	24	1705	1136	0.022	0.044	0.110	0.220	0.441
	Bearing Bar Width: 0.3125"	36	518	345	0.072	0.145	0.362	*	*
	Open Area: 72%	48	266	177	0.141	0.282	*	*	*
	Panel Wt (Men./Grit): 176/201 lbs Wt/sf (Men./Grit): 3.07/4.2 lbs/sf								
CENTURION™ GRATING:		SPAN	MAX LOAD(LB/SF)		LOAD (LB)				
2" THICK (2" x 2" SQUARE MESH)		INCH	NORMAL	FIRM	100	200	500	1000	2000
Specifically designed for maximum stiffness and strength without excessive weight. The square mesh pattern also means efficient panel utilization and ability to handle loads in both directions. Ideal for longer spans or heavier loads.	Center-Center: 2.0" x 2.0"	12	>3000	>3000	*	*	0.017	0.031	0.056
	Bar Height: 2.0"	18	>3000	>3000	*	0.014	0.036	0.071	0.145
	Tie Bar Width: 0.3125"	24	2660	1791	0.014	0.026	0.066	0.136	0.280
	Bearing Bar Width: 0.3125"	36	875	586	0.042	0.085	0.213	0.429	*
	Open Area: 71%	48	400	267	0.092	0.187	0.469	*	*
	Panel Wt (Men./Grit): 191/216 lbs Wt/sf (Men./Grit): 4.0/4.5 lbs/sf								

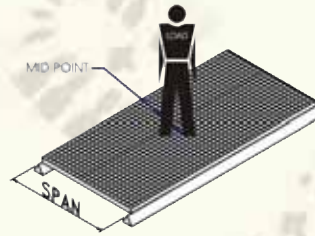
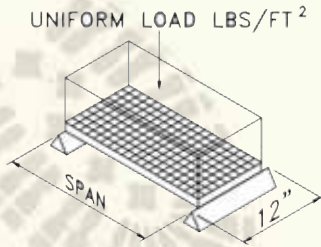
“Normal” is the load (in pounds) that will produce a deflection of 0.375" (accepted as providing a “Normal” feel for foot traffic)

“Firm” is the load (in pounds) that will produce a deflection of 0.250" (accepted as providing a “Firm” feel for foot traffic)

All deflections are presented in inches. Loads are presented in pounds.



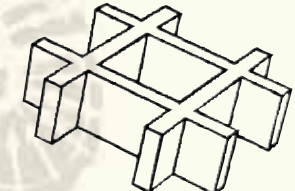
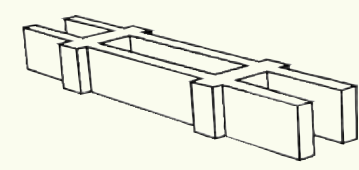
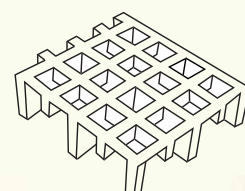
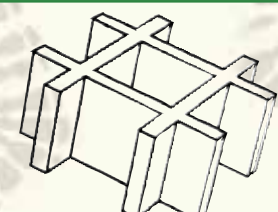
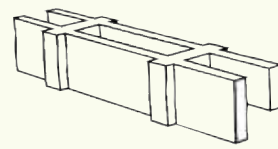
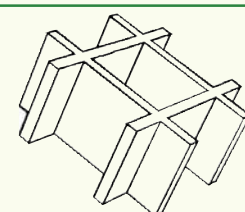
**UNIFORM LOAD (FULL PANEL):**  
REFLECTS THE DEFLECTION ACHIEVED WITH LOADS DISTRIBUTED EVENLY ACROSS 12' LONG GRATING PIECES OF VARYING SPANS.



**POINT LOAD:**  
REFLECTS THE DEFLECTION ACHIEVED BY CONCENTRATED POINT LOAD APPLIED AT THE CENTER OF A GRATING PANEL OF VARYING SPANS. MAXIMUM LOADS FOR "NORMAL" OR "FIRM" SUPPORT UNDER THIS LOADING ARE INDICATED.

**UNIFORM LOAD (FULL PANEL)**

**POINT LOAD**

MAX LOAD(LB/SF)		LOAD (LB)					LOAD (LB)		
NORMAL	FIRM	50	100	150	200	250	NORMAL	FIRM	
>3000	2520	*	*	0.013	0.018	0.023	2789	1863	
927	615	0.022	0.043	0.064	0.084	0.104	1740	1157	
328	221	0.058	0.111	0.168	0.226	0.284	951	632	
77	52	0.242	*	*	*	*	371	233	
40	30	*	*	*	*	*	246	166	
MAX LOAD(LB/SF)		LOAD (LB)					LOAD (LB)		
NORMAL	FIRM	50	100	150	200	250	NORMAL	FIRM	
>3000	>3000	*	*	*	*	0.012	>3000	>3000	
1802	1201	0.010	0.021	0.031	0.041	0.052	>3000	2288	
601	401	0.031	0.063	0.094	0.125	0.156	2245	1496	
112	75	0.167	0.334	0.500	*	*	849	535	
53	36	0.351	*	*	*	*	497	320	
MAX LOAD(LB/SF)		LOAD (LB)					LOAD (LB)		
NORMAL	FIRM	50	100	150	200	250	NORMAL	FIRM	
>3000	>3000	*	*	*	0.011	0.015	>3000	>3000	
2232	1488	*	0.017	0.024	0.032	0.042	>3000	1956	
775	517	0.026	0.047	0.066	0.092	0.121	2191	1478	
197	172	0.067	0.190	0.286	0.418	0.485	968	607	
64	42	0.176	*	*	*	*	587	376	
MAX LOAD(LB/SF)		LOAD (LB)					LOAD (LB)		
NORMAL	FIRM	50	100	150	200	250	NORMAL	FIRM	
>3000	>3000	*	*	*	*	0.011	>3000	>3000	
>3000	2460	*	0.013	0.019	0.024	0.029	>3000	2842	
1223	807	0.021	0.037	0.052	0.068	0.083	2985	1990	
244	162	0.074	0.149	0.225	0.329	0.381	1232	778	
130	61	0.235	0.471	*	*	*	749	474	
MAX LOAD(LB/SF)		LOAD (LB)					LOAD (LB)		
NORMAL	FIRM	50	100	150	200	250	NORMAL	FIRM	
>3000	>3000	*	*	*	*	*	>3000	>3000	
>3000	2460	*	*	0.014	0.019	0.023	>3000	>3000	
1359	807	0.014	0.028	0.041	0.055	0.069	>3000	2224	
276	162	0.067	0.136	0.204	0.272	0.339	1360	827	
107	71	0.176	0.353	*	*	*	781	510	
MAX LOAD(LB/SF)		LOAD (LB)					LOAD (LB)		
NORMAL	FIRM	50	100	150	200	250	NORMAL	FIRM	
>3000	>3000	*	*	*	*	*	>3000	>3000	
>3000	>3000	*	*	0.010	0.013	0.017	>3000	>3000	
2337	1556	*	0.016	0.025	0.033	0.041	>3000	2796	
469	312	0.040	0.079	0.119	0.160	0.200	1843	1225	
160	106	0.117	0.234	0.352	0.470	*	988	660	

Deflections less than 0.010" and greater than 0.500" have been omitted. The use of various resins, reinforcements and surfaces can result in variations of up to 15% in load data. Free span width for 48" span data is 2" less than width of grating. This information is provided as a guide to the use and application of Century™ grating and is not or does not represent a specific warranty of the product or its performance. The designer or user must determine the suitability of this product for a specific application.

### CHEMICAL RESISTANCE GUIDE

CHEMICAL ENVIRONMENT	CONCENTRATION	CENTURION™ (GP)	CENTURION™ (ISO)	CENTURION™ (VE)
		SUITABILITY (MAX. TEMP. F)	SUITABILITY (MAX. TEMP. F)	SUITABILITY (MAX. TEMP. F)
Acetic Acid	50%	NR	+++ (150)	+++ (180)
Acetone	100%	NR	+ (75)	++ (75)
Alcohols	100%	NR	NR	+++ (120)
Alum	ALL	NR	+++ (150)	+++ (180)
Aluminum Chloride	ALL	NR	+++ (150)	+++ (180)
Aluminum Fluoride	20%	NR	NR	+++ (75)
Aluminum Hydroxide	ALL	NR	++ (130)	+++ (160)
Ammonium Hydroxide	30%	NR	NR	+ (75)
Ammonium Salts-Neutral	ALL	NR	++ (120)	+++ (120)
Barium Salts	ALL	NR	+++ (150)	+++ (180)
Benzene	100%	NR	NR	NR
Biodegradable Cleaner	100%	NR	+++ (100)	+++ (120)
Black Liquor (Pulp Mill)	ALL	NR	+ (150)	+++ (180)
Bleach Liquor (Pulp Mill)	ALL	NR	NR	++ (120)
Calcium Hydroxide	25%	NR	++ (140)	+++ (170)
Carbon Monoxide Gas	100%	NR	+++ (150)	+++ (180)
Carbon Tetrachloride	100%	NR	NR	+++ (75)
Chlorine, Wet Gas	SAT	NR	NR	+++ (140)
Chlorine Water	SAT	NR	NR	+++ (120)
Chlorobenzene	100%	NR	NR	NR
Chloroform	100%	NR	NR	NR
Copper Cyanide Plating Soln.	ALL	NR	+ (100)	+++ (120)
Copper Salts	ALL	NR	+++ (140)	+++ (180)
Crude Oil	100%	NR	+++ (140)	+++ (170)
Diesel Fuel	ALL	NR	+++ (100)	+++ (100)
Diethyl Benzene	100%	NR	NR	NR
Ethers	100%	NR	NR	NR
Ethylene Glycol	100%	NR	+++ (150)	+++ (180)
Fatty Acids	SAT	NR	+++ (150)	+++ (180)
Ferric Chloride	SAT	NR	+++ (140)	+++ (170)
Fluoride Salt	ALL	NR	+ (75)	+++ (75)
Formaldehyde	25%	NR	NR	+++ (140)
Formaldehyde	100%	NR	NR	NR
Formic Acid	25%	NR	+ (95)	+++ (95)

+++  
 Suitable for continuous exposure to the indicated chemical environment

++  
 Suitable for frequent splash and spill exposure to the indicated chemical environment

±  
 Suitable for incidental exposure, including occasional splashes and spills, to the indicated chemical environment

Max. Temp F  
 Maximum recommended temperature for the indicated chemical environment

## CHEMICAL RESISTANCE GUIDE

CHEMICAL ENVIRONMENT	CONCENTRATION	CENTURION™ (GP)		CENTURION™ (ISO)		CENTURION™ (VE)	
		SUITABILITY (MAX. TEMP. F)		SUITABILITY (MAX. TEMP. F)		SUITABILITY (MAX. TEMP. F)	
Gasoline	ALL	NR		+++	(100)	+++	(100)
Glycerine	100%	NR		+++	(140)	+++	(170)
Green Liquor (Pulp Mill)	ALL	NR		NR		+++	(150)
Heptane	100%	NR		+++	(130)	+++	(180)
Hexane	100%	NR		+	(90)	+++	(140)
Hydrochloric Acid	10%	NR		+++	(140)	+++	(170)
Hydrochloric Acid	30%	NR		+	(140)	+++	(170)
Hydrofluoric Acid	20%	NR		NR		+++	(75)
Hydrogen Peroxide	30%	NR		NR		+++	(75)
Kerosene	100%	NR		+++	(150)	+++	(180)
Lactic Acid	100%	NR		+++	(140)	+++	(170)
Lime Slurry	SAT	NR		+++	(140)	+++	(170)
Methyl Ethyl Ketone	100%	NR		NR		NR	
Mercury Chloride	100%	NR		+++	(140)	+++	(170)
Mineral Oil	100%	NR		+++	(150)	+++	(180)
Naphtha	100%	NR		+++	(130)	+++	(150)
Nickel Salts	ALL	NR		+++	(140)	+++	(170)
Nitric Acid	20%	NR		++	(120)	+++	(120)
Nitric Acid	30%	NR		NR		++	(90)
Ozone	ALL	NR		+++	(100)	+++	(100)
Phenol	10%	NR		NR		NR	
Potassium Hydroxide	10%	NR		NR		+++	(110)
Potassium Salts	ALL	NR		+++	(140)	+++	(170)
Propylene Glycol	ALL	NR		+++	(150)	+++	(180)
Sea Water	100%	+++	(140)	+++	(120)	+++	(140)
Sodium Hydroxide	50%	NR		NR		+++	(150)
Sodium Salts	ALL	NR		+++	(140)	+++	(170)
Sulfur Dioxide	VAPOR	NR		++	(150)	+++	(170)
Sulfuric Acid	25%	NR		++	(140)	+++	(170)
Sulfuric Acid	50%	NR		++	(120)	+++	(140)
Toluene	100%	NR		NR		+	(100)
Water (Fresh, Salt, Deionized)	100%	+++	(180)	+++	(150)	+++	(180)
White Liquor (Pulp Mill)	ALL	NR		+	(140)	+++	(170)
Zinc Chloride	SAT	NR		+	(75)	+++	(75)

Consult the manufacturer for exposure information or recommendations for temperatures or chemicals not indicated in this guide. The information in this guide is correct to the best of the manufacturers' knowledge. This guide is based on extrapolations of data supplied by resin manufacturers as well as service history of this product in corrosive environments.

No warranty is expressed or implied, including warranty of merchantability or fitness for any specific application. In no event will Century Composites be liable for incidental or consequential damages whether arising from alleged negligence, strict liability or otherwise.

Because actual use conditions differ and combinations of chemicals and temperatures will occur in service, the end user must test for use and applicability under actual conditions. Test samples are available upon specific request.



### CUSTOM MANUFACTURING

In addition to CENTURION™ Molded Grating, Century Composites is committed to the manufacture of high quality FRP and molded thermoplastic parts for industrial and commercial applications.

The company's services include:

- Design and Engineering: our engineers have the skills and experience to guide your project from start to finish
- Tooling: Tooling is produced from AutoCAD or ProE design drawings or from 3D scans of samples or existing parts
- Manufacturing and Secondary Operations: a wide range of manufacturing technologies and secondary operations are available
- Logistics: product can be delivered in batch production quantities or shipped on demand from our two strategically located distribution centers



### THERMOSET (FRP) PRODUCTION

Century Composites manufactures high quality fiberglass reinforced plastic products for industrial applications. The company specializes in:

- Hand Lay Up
- Spray Up
- Resin Transfer Molding
- BMC/Compression Molding

### THERMOPLASTIC MOLDING

Century Composites' manufacturing division includes plastics molding operations for industrial and commercial products.

Capabilities include:

- Injection Molding
- Extrusion
- Vacuum Forming
- Assembly
- Packaging



## WARRANTY

Century Composites LLC takes great pride in the quality products that it manufactures. The company maintains high standards for the materials and workmanship that it invests in its product. Accordingly, Century Composites LLC warrants its products as follows:

Century Composites LLC warrants its products to be free of defects in materials and workmanship. Should any products or parts manufactured by Century Composites LLC become defective within one year from the date of original purchase, the parts will be replaced or repaired if the defect is proven to be the responsibility of Century Composites LLC. Warranty begins on the date of purchase from Century Composites LLC.

This warranty extends to the party making the original purchase of products from Century Composites LLC and is not enforceable by any other party. The foregoing warranty does not apply to components manufactured by others; for such products the warranty established by the respective manufacturer, if any, will apply.

Century Composites LLC will not be liable for the cost of cartage, removal and/or reinstallation labor or any other such costs incurred in obtaining warranty replacement products.

This warranty does not cover failure in service due to improper installation, improper operation, improper environment, negligence, accidents, fire, wreckage, freezing, improper repackaging or damage incurred in shipping. Century Composites LLC shall not be liable for any injury, loss, or damage, direct or consequential, arising out of the use of its products.

This warranty gives you specific legal rights. You may also have other rights which vary from state to state.

For communication related to replacement products or other warranty issues, please contact:

Century Composites LLC  
140 Celtic Boulevard Tyrone, Georgia 30290  
Phone: 800.733.9060 Fax: 770.632.7115

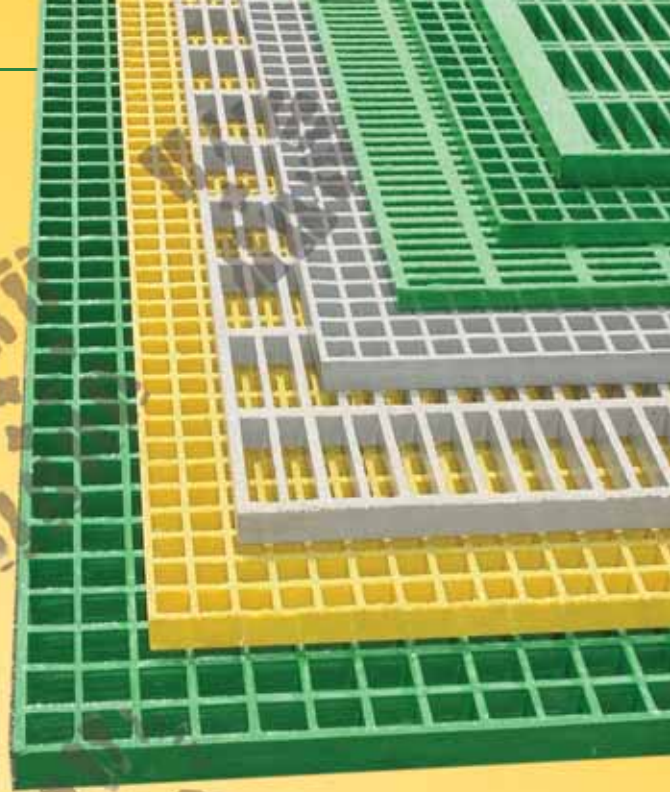
## FABRICATION OF FIBERGLASS GRATING

**CUTTING:** USE A MASONRY BLADE FOR STRAIGHT SMOOTH CUTS. FOR CIRCULAR CUTS USE A JIG SAW WITH AN ABRASIVE BLADE. DIAMOND GRIT BLADES ARE JUSTIFIED ON LARGE JOBS.

**ALL CUTTING AND GRINDING** SHOULD BE DONE IN WELL VENTILATED AREAS. A DUST COLLECTION SYSTEM WILL MINIMIZE EXPOSURE TO DUST GENERATED.

**ALL CUT EDGES** SHOULD BE SEALED WITH A RESIN SIMILAR TO THAT OF THE GRATING FOR MAXIMUM CORROSION RESISTANCE TO PREVENT WICKING THROUGH THE COMPOSITE.

**ALWAYS WEAR** APPROVED SAFETY GLASSES OR VENTED SAFETY GOGGLES FOR EYE PROTECTION AND A RESPIRATOR MASK TO REDUCE INHALATION OF DUST WHEN CUTTING OR SANDING. THE DUST RESPIRATOR SHOULD BE NIOSH/MSHA APPROVED WITH A PERMISSABLE EXPOSURE LIMIT (PEL) OF NOT LESS THAN 0.1 MG/M<sup>3</sup>



## SPECIAL REQUIREMENTS

YOUR PLANT OR PROJECT MAY REQUIRE SPECIAL SIZES, SHAPES, OR COMPOSITES. SHOULD THESE BE OF A MEANINGFUL SIZE OR ON-GOING REQUIREMENT, WE WOULD LIKE TO WORK WITH YOU TO ACCOMMODATE THOSE NEEDS.

SHOULD YOU HAVE REQUIREMENTS FOR OTHER FIBERGLASS OR INJECTION MOLDED COMPONENTS FOR YOUR OWN PRODUCTION, WE WOULD LIKE TO TALK TO YOU ABOUT THOSE REQUIREMENTS.



# Century Composites LLC

140 Celtic Blvd. Tyrone, GA 30290 USA Phone 770-632-7112 Fax 770-632-7115

[www.century-composites.com](http://www.century-composites.com)