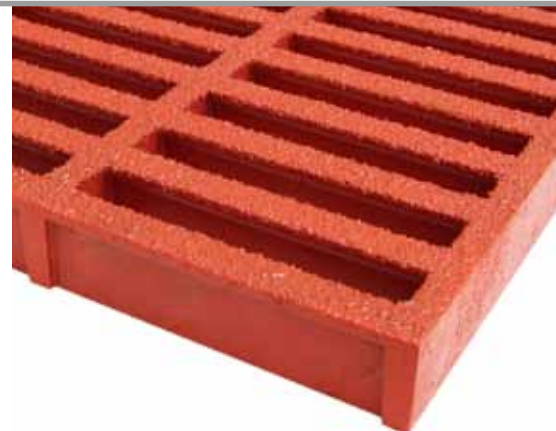


# DEFI

STRUCTURAL FIBERGLASS

# PHENOLIC MOLDED AND PULTRUDED FIBERGLASS GRATING



Phenolic Pultruded and molded grating provides the superior solution for decks, platforms, stairways, and walkways that require superior resistance to fire and low levels of smoke and toxic gas emissions. DEFI's phenolic grating products are manufactured to the highest quality standards and are USCG level 2 approved. Manufactured from fiberglass reinforcement and phenolic resin system.



## Applications

- Offshore Platforms
- Marine and Ocean Going Vessels
- Tunnels / Public Transportation
- Mining
- Public Buildings
- Industrial / Processing Plants
- Refineries

## Features

- High Temperature and Fire Resistance
- Low Smoke and Toxic Fume Emissions
- Lightweight
- Low Maintenance
- Easy to Install

## Types and Sizes Available

<b>Molded</b>	1 ½ x 1 ½ x 6	4' x 12' panels	USCG Approval # 164.040/14/0
<b>Pultruded</b>	115-60	3' x 20' & 4' x 20' panels	USCG Approval # 164.040/13/0



**United States Coast Guard  
APPROVED**

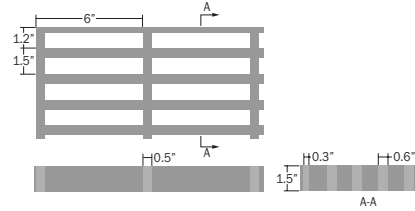
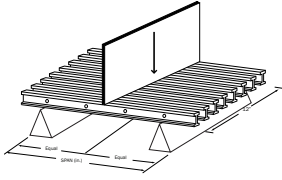
**DEFI**  
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# USCG PHENOLIC GRATING LOAD & DEFLECTION DATA

- This table was developed in accordance with the test method developed by the Fiberglass Grating Manufacturers Council (FGMC) of the American Composites Manufacturers Association (ACMA) for the Fiberglass Grating Standard.
- The designer should not exceed MAXIMUM RECOMMENDED load at any time. MAXIMUM LOAD represents a 5:1 factor of safety on ULTIMATE CAPACITY. ULTIMATE CAPACITY represents MAX LOAD observed at initial fracture.
- Walking loads for maintenance traffic are typically a live load of 50 PSF. Deflections for worker comfort are typically limited to 3/8" or SPAN divided by 120 under full live load. For a firmer feel under full live load or a line load 250 lbs/ft of width, limit deflections to 1/4" or SPAN divided by 200.
- The loads represented are for STATIC LOAD CONDITIONS at ambient temperature. Deflections for impact loads or dynamic loads will MULTIPLY the deflections shown by 2. Long term loads will result in added deflection due to creep in the material and will require higher factors of safety to ensure acceptable performance.
- Deflections are limited to 1/2" as recommended by the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association.



## Molded Phenolic Grating

USCG Approval # 164.040/14/0

1 1/2 x 1 1/2 x 6 PH

1-1/2" Thick

1 1/2 x 6

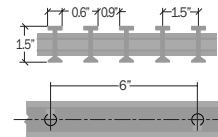
Rectangular Grid

Span (inches)	CONCENTRATED LOAD in Lbs/ft of width								MAX LOAD	APPARENT EI x 10 <sup>-6</sup> lb-in <sup>2</sup>
	50	100	150	200	250	500	1000	2000		
12"	0.00	0.00	0.00	0.01	0.01	0.01	0.03	0.05	3,780	1.39
18"	0.00	0.01	0.01	0.01	0.02	0.03	0.07	0.13	2,520	1.87
24"	0.01	0.01	0.02	0.03	0.03	0.07	0.14	0.27	1,890	2.13
30"	0.01	0.03	0.04	0.05	0.06	0.13	0.25	0.50	1,512	2.24
36"	0.02	0.04	0.06	0.09	0.11	0.21	0.43		1,260	2.28
42"	0.03	0.07	0.10	0.13	0.17	0.33	0.66		1,080	2.32
44"	0.04	0.08	0.11	0.15	0.19	0.38			1,031	2.34
48"	0.05	0.10	0.15	0.20	0.24	0.49			945	2.36
54"	0.07	0.14	0.21	0.28	0.34	0.69			840	2.39

Span (inches)	UNIFORM LOAD in Lbs/ft <sup>2</sup>								MAX LOAD	APPARENT EI x 10 <sup>-6</sup> lb-in <sup>2</sup>
	50	100	150	200	250	500	1000	2000		
12"	<.001	0.00	0.00	0.00	0.00	0.01	0.02	0.03	7,560	1.39
18"	0.00	0.01	0.01	0.01	0.02	0.03	0.06	0.12	3,360	1.87
24"	0.01	0.02	0.03	0.03	0.04	0.09	0.17	0.34	1,890	2.13
30"	0.02	0.04	0.06	0.08	0.10	0.17	0.39		1,210	2.24
36"	0.04	0.08	0.12	0.16	0.20	0.39			840	2.28
42"	0.07	0.15	0.22	0.29	0.36				617	2.32
44"	0.03	0.17	0.26	0.35	0.43				562	2.34
48"	0.12	0.24	0.37	0.49	0.61				473	2.36
54"	0.19	0.39	0.58						373	2.39

Weight: 3.90 lbs/sq. ft.

Properties per Foot of Width	# of Bars	Load Bar Width	Bar Centers	Opening
A=4.39 in <sup>2</sup> I=0.88 in <sup>4</sup> S <sub>T</sub> =1.30 in <sup>3</sup> S <sub>B</sub> =1.06 in <sup>3</sup>	8	0.6"	1 1/2"	55%



## Pultruded Phenolic Grating

USCG Approval # 164.040/13/0

I15-60 PH

I Bearing Bar

1-1/2" Thick

60% Open

Span (inches)	CONCENTRATED LOAD in Lbs/ft of width								MAX LOAD	APPARENT EI x 10 <sup>-6</sup> lb-in <sup>2</sup>
	50	100	150	200	250	500	1000	2000		
12"	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.04	6,222	1.80
18"	0.00	0.01	0.01	0.01	0.01	0.02	0.05	0.09	4,148	2.60
24"	0.01	0.01	0.01	0.02	0.02	0.05	0.09	0.18	3,111	3.20
30"	0.01	0.02	0.02	0.03	0.04	0.08	0.15	0.31	2,489	3.66
36"	0.01	0.02	0.04	0.05	0.06	0.12	0.24	0.48	2,074	4.02
42"	0.02	0.04	0.05	0.07	0.09	0.18	0.36		1,778	4.28
44"	0.02	0.04	0.06	0.08	0.10	0.20	0.40		1,697	4.46
48"	0.03	0.05	0.08	0.10	0.13	0.26	0.51		1,556	4.50
54"	0.04	0.07	0.11	0.15	0.18	0.36			1,383	4.52

Span (inches)	UNIFORM LOAD in Lbs/ft <sup>2</sup>								MAX LOAD	APPARENT EI x 10 <sup>-6</sup> lb-in <sup>2</sup>
	50	100	150	200	250	500	1000	2000		
12"	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.03	15,555	1.80
18"	0.00	0.00	0.01	0.01	0.01	0.02	0.04	0.09	6,057	2.60
24"	0.01	0.01	0.02	0.02	0.03	0.06	0.11	0.23	3,182	3.20
30"	0.01	0.02	0.04	0.05	0.06	0.12	0.24	0.48	1,992	3.66
36"	0.02	0.05	0.07	0.09	0.11	0.23	0.45		1,393	4.02
42"	0.04	0.08	0.12	0.16	0.20	0.39			1,014	4.28
44"	0.05	0.09	0.14	0.18	0.23	0.46			927	4.46
48"	0.06	0.13	0.19	0.26	0.32	0.64			778	4.50
54"	0.10	0.20	0.31	0.41	0.51				615	4.52

Weight: 3.06 lbs/sq. ft.

Properties per Foot of Width	# of Bars	Load Bar Width	Bar Centers	Opening
A=3.11 in <sup>2</sup> I=0.88 in <sup>4</sup> S <sub>T</sub> =1.17 in <sup>3</sup>	8	0.6"	1 1/2"	60%



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