MARCO SPECIALTY STEEL

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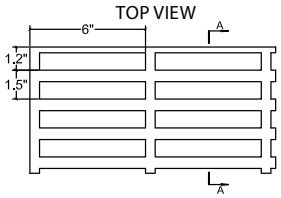
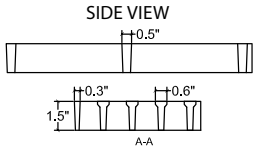
USCG Phenolic Fiberglass Grating

Molded Phenolic Grating

USCG Approved
1.5" x 1.5" x 6" PH Rectangular Grid
1.5″ Thick / 55% Open





Bearing bars are on 1.5'' centers running in the 12' direction.

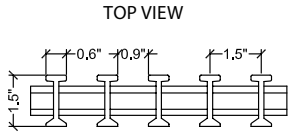
Span (inches)	CONCENTRATED LOAD in lbs/ft of width								Max Load (lb-ft)	Apparent EI x 10^6 (lb-in^2)
	50	100	150	200	250	500	1000	2000		
12	0.001	0.003	0.004	0.005	0.006	0.013	0.026	0.052	3780	1.39
18	0.003	0.006	0.010	0.013	0.016	0.032	0.065	0.130	2520	1.87
24	0.007	0.014	0.020	0.027	0.034	0.068	0.135	0.270	1890	2.13
30	0.013	0.025	0.038	0.050	0.063	0.126	0.251	0.502	1512	2.24
36	0.021	0.043	0.064	0.085	0.107	0.213	0.427		1260	2.28
42	0.033	0.066	0.100	0.133	0.166	0.332	0.664		1180	2.32
44	0.038	0.076	0.114	0.152	0.189	0.379			1031	2.34
48	0.049	0.098	0.146	0.195	0.244	0.488			945	2.36
54	0.069	0.137	0.206	0.275	0.343	0.687			840	2.39

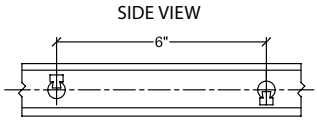
Span (inches)	UNIFORM LOAD in lbs/ft^2								Max Load (lb-ft)	Apparent EI x 10^6 (lb-in^2)
	50	100	150	200	250	500	1000	2000		
12	<0.001	0.002	0.002	0.003	0.004	0.008	0.016	0.032	7560	1.39
18	0.003	0.006	0.009	0.012	0.015	0.030	0.061	0.122	3360	1.87
24	0.008	0.17	0.025	0.034	0.042	0.085	0.169	0.338	1890	2.13
30	0.020	0.039	0.059	0.078	0.098	0.196	0.392		1210	2.24
36	0.040	0.080	0.120	0.160	0.200	0.400			840	2.28
42	0.073	0.145	0.218	0.291	0.363				617	2.32
44	0.087	0.174	0.260	0.347	0.434				562	2.34
48	0.122	0.244	0.366	0.488	0.610				473	2.36
54	0.193	0.386	0.579						373	2.39

Properties Per Foot of Width	# of Bars	Load Bar Width	Bar Centers	Weight/sq ft
A = 4.39 in^2 I = 0.88 in^4 S_T = 1.30 in^3 S_B = 1.06 in^3	8	0.6"	1.5"	3.90

Pultruded Phenolic Grating

USCG Approved
1.5" Deep I-Bearing Bar (I 15-60PH)
1.5″ Thick / 60% Open



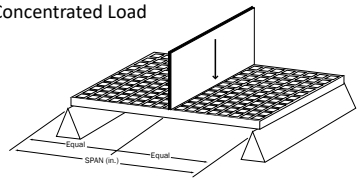


Span (inches)	CONCENTRATED LOAD in lbs/ft of width								Max Load (lb-ft)	Apparent EI x 10^6 (lb-in^2)
	50	100	150	200	250	500	1000	2000		
12	0.001	0.002	0.003	0.004	0.005	0.010	0.020	0.040	6222	1.8
18	0.002	0.005	0.007	0.009	0.012	0.023	0.047	0.093	4148	2.6
24	0.005	0.009	0.014	0.018	0.023	0.045	0.090	0.180	3111	3.2
30	0.008	0.015	0.023	0.031	0.038	0.077	0.154	0.307	2489	3.66
36	0.012	0.024	0.036	0.048	0.060	0.121	0.242	0.484	2074	4.02
42	0.018	0.036	0.054	0.072	0.090	0.180	0.361		1778	4.28
44	0.020	0.040	0.060	0.080	0.099	0.199	0.398		1697	4.46
48	0.026	0.051	0.077	0.102	0.128	0.256	0.512		1556	4.5
54	0.036	0.073	0.109	0.145	0.181	0.363			1383	4.52

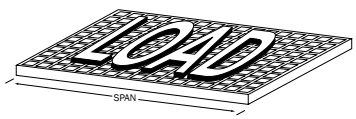
Span (inches)	UNIFORM LOAD in lbs/ft^2								Max Load (lb-ft)	Apparent EI x 10^6 (lb-in^2)
	50	100	150	200	250	500	1000	2000		
12	0.001	0.001	0.002	0.002	0.003	0.006	0.012	0.025	15555	1.8
18	0.003	0.004	0.007	0.009	0.011	0.022	0.044	0.088	6057	2.6
24	0.006	0.011	0.017	0.022	0.028	0.056	0.112	0.225	3182	3.2
30	0.012	0.024	0.036	0.048	0.060	0.120	0.240	0.480	1992	3.66
36	0.023	0.045	0.068	0.091	0.113	0.227	0.453		1393	4.02
42	0.039	0.079	0.118	0.158	0.197	0.394			1014	4.28
44	0.046	0.091	0.137	0.182	0.228	0.456			927	4.46
48	0.064	0.128	0.192	0.256	0.320	0.640			778	4.5
54	0.102	0.204	0.306	0.408	0.510				615	4.52

Properties Per Foot of Width	# of Bars	Load Bar Width	Bar Centers	Weight/sq ft
A = 3.11 in^2 I = 0.88 in^4 S_T = 1.17 in^3	8	0.6"	1.5"	3.06

Concentrated Load



Uniform Load



1. These tables were 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.
2. 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.
3. 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 250lbs/ft of width, limit deflections to 1/4" or SPAN divided by 200.
4. 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.
5. Deflections are limited to 1/2" as recommended by the Fiberglass Grating Manufacturers Council of the American Composites Manufacturers Association.

QUALITY ♦ SPEED ♦ RELIABILITY