

# ▶ Marine Guard™ Foam Filled Fender

**Urethane Products Corporation (UPC) engineers a wide range of Fender Systems to protect Naval Vessels, Commercial Tankers, Cruise Ships, Docks and Harbors.**

Built to the United States Navy and Coast Guard Stringent Specifications.

Constructed with closed cell energy absorbing foam protected by a non-marking polyurethane elastomer skin reinforced with tire nylon cord for consistent performance over years of service.

Strength built into the fender by heavy duty integral hardware system consisting of stud link chain and swivel end fittings to allow free rotation of the fender body.

**High Energy Absorption** Up to 40% better than comparable sized pneumatic fenders.

**Low Reaction Force** Slow gradual reaction force compared to hard rubber type fenders.

**Easy Installation** Can be installed fixed or floating.

**Hull Conforming** Protrusions from ship hull will not damage or harm fender.

**Low Maintenance** No pressure relief or inflation valves to maintain.

**Unsinkable** Even when punctured (unlike pneumatic fenders).

MARINE GUARD DESCRIPTION

MARINE GUARD ADVANTAGES



**URETHANE PRODUCTS CORPORATION**  
17842 SAMPSON LANE  
HUNTINGTON BEACH, CA 92647  
TOLL FREE 800.913.0062  
TEL 714.375.4982 FAX 714.375.4904  
E-mail: [sales@urethaneproducts.com](mailto:sales@urethaneproducts.com)  
[www.urethaneproducts.com](http://www.urethaneproducts.com)



Copyright © 2007 UPC

# Marine Guard™

## ▶ Foam Filled Fender Engineering Specification Data

URETHANE PRODUCTS CORPORATION

17842 SAMPSON LANE

HUNTINGTON BEACH, CA 92647

TOLL FREE 800.913.0062

TEL 714.375.4982 FAX 714.375.4904

E-mail: sales@urethaneproducts.com

www.urethaneproducts.com



FENDERS		STANDARD				HIGH CAPACITY				EXTRA HIGH CAPACITY				SUPER HIGH CAPACITY			
ENGLISH	METRIC	ENERGY ABSORPTION		REACTION FORCE		ENERGY ABSORPTION		REACTION FORCE		ENERGY ABSORPTION		REACTION FORCE		ENERGY ABSORPTION		REACTION FORCE	
ft x ft	m x m	ft - kips	ton-m	kips	tons	ft - kips	ton-m	kips	tons	ft - kips	ton-m	kips	tons	ft - kips	ton-m	kips	tons
2 x 4	0.6 x 1.2	11	2	20	9	14	2	26	12	21	3	38	17	29	4	52	24
2 x 6	0.6 x 1.8	18	3	33	15	23	3	43	20	34	5	63	29	47	7	86	39
3 x 5	0.9 x 1.5	31	4	45	20	40	6	59	27	59	8	86	39	81	11	117	53
3 x 6	0.9 x 1.8	39	5	48	22	51	7	62	28	74	10	91	41	101	14	125	57
3 x 8	0.9 x 2.4	55	8	68	31	72	10	88	40	105	15	129	59	143	20	177	80
3 x 10	0.9 x 3.0	71	10	88	40	92	13	114	52	135	19	167	76	185	26	229	104
3 x 12	0.9 x 3.7	87	12	108	49	113	16	140	64	165	23	205	93	226	31	281	127
4 x 6	1.2 x 1.8	60	8	56	26	78	11	73	33	114	16	106	48	156	22	146	66
4 x 8	1.2 x 2.4	89	12	83	38	116	16	108	49	169	23	158	72	231	32	216	98
4 x 10	1.2 x 3.0	118	16	111	50	153	21	144	65	224	31	211	96	307	42	289	131
4 x 12	1.2 x 3.7	146	20	136	62	190	26	177	80	277	38	258	117	380	53	354	161
4 x 16	1.2 x 4.9	203	28	189	86	264	37	246	112	386	53	359	163	528	73	491	223
4 x 20	1.2 x 6.1	260	36	242	110	338	47	315	143	494	68	460	209	676	93	629	285
5 x 8	1.5 x 2.4	135	18	100	45	176	24	130	59	257	36	190	86	351	49	260	118
5 x 10	1.5 x 3.0	180	25	134	61	234	32	174	79	342	47	255	116	468	65	348	158
5 x 12	1.5 x 3.7	225	31	167	75	293	41	217	98	428	59	317	144	585	81	434	197
5 x 14	1.5 x 4.3	269	37	200	91	350	48	260	118	511	71	380	172	699	97	520	236
5 x 16	1.5 x 4.9	313	43	233	106	407	56	303	137	595	82	443	201	814	113	606	275
5 x 18	1.5 x 5.5	357	49	266	121	464	64	346	157	678	94	505	229	928	128	692	314
6 x 12	1.8 x 3.7	300	41	186	84	390	54	242	110	570	79	353	160	780	108	484	220
6 x 14	1.8 x 4.3	364	50	225	102	473	65	293	133	692	96	428	194	946	131	585	265
6 x 16	1.8 x 4.9	427	59	265	120	555	77	345	156	811	112	504	229	1110	154	689	313
6 x 18	1.8 x 5.5	491	68	305	138	638	88	397	180	933	129	580	263	1277	177	793	360
6 x 20	1.8 x 6.1	554	77	344	156	720	100	447	203	1053	146	654	297	1440	199	894	406
7 x 14	2.1 x 4.3	487	67	259	117	633	88	337	153	925	128	492	223	1266	175	673	305
7 x 16	2.1 x 4.9	574	79	305	138	746	103	397	180	1091	151	580	263	1492	206	793	360
7 x 18	2.1 x 5.5	660	91	351	159	858	119	456	207	1254	173	667	303	1716	237	913	414
7 x 20	2.1 x 6.1	747	103	397	180	971	134	516	234	1419	196	754	342	1942	269	1032	468
7 x 22	2.1 x 6.7	833	115	443	201	1083	150	576	261	1583	219	842	382	2166	300	1152	523
8 x 14	2.4 x 4.3	619	85	288	130	805	111	374	170	1176	163	547	248	1609	223	749	340
8 x 16	2.4 x 4.9	733	101	341	155	953	132	443	201	1393	193	648	294	1906	264	887	402
8 x 18	2.4 x 5.5	847	117	394	179	1101	152	512	232	1609	223	749	340	2202	305	1024	464
8 x 20	2.4 x 6.1	961	133	447	203	1249	173	581	264	1826	253	849	385	2499	346	1162	527
8 x 22	2.4 x 6.7	1075	149	500	227	1398	193	650	295	2043	283	950	431	2795	387	1300	590
9 x 16	2.7 x 4.9	890	123	368	167	1157	160	478	217	1691	234	699	317	2314	320	957	434
9 x 18	2.7 x 5.5	1032	143	427	194	1342	186	555	252	1961	271	811	368	2683	371	1110	503
9 x 20	2.7 x 6.1	1175	163	486	220	1528	211	632	287	2233	309	923	419	3055	423	1264	573
9 x 22	2.7 x 6.7	1318	182	545	247	1713	237	709	322	2504	346	1036	470	3427	474	1417	643
10 x 16	3.0 x 4.9	1081	150	402	182	1405	194	523	237	2054	284	764	347	2811	389	1045	474
10 x 18	3.0 x 5.5	1258	174	468	212	1635	226	608	276	2390	331	889	403	3271	452	1217	552
10 x 20	3.0 x 6.1	1435	198	534	242	1866	258	694	315	2727	377	1015	460	3731	516	1388	630
10 x 22	3.0 x 6.7	1612	223	600	272	2096	290	780	354	3063	424	1140	517	4191	580	1560	708

ACTUAL VALUES MAY VARY ±15% DUE TO VARIATIONS IN MATERIALS, TEMPERATURE, TOLERANCES, AND SPEED OF COMPRESSION.  
LARGER FENDER SIZES AVAILABLE.