





Synthetic Ropes

In conjunction with the inauguration of our highly anticipated Web Center, Mid-America has staffed synthetics specialists dedicated to synthetic ropes and the design, fabrication and testing of their assemblies. Some of our stock rope specifications are listed below and include 3-Strand Nylon, POLYDAC, Stable Braid, Polypropylene, Sisal, Manila and Sash Cord. Contact us for your custom synthetic rope assembly needs or inquire about our specialized manufacturing of synthetic:

- Tag Lines
- Winch Lines
- Bridle Lines

You may also view our rigging hardware for a variety of hooks, master links and other fittings and attachments. Our most popular synthetic rope attachments are the Double Locking Ladder Hooks, Double Locking Lanyard Hooks, 1.5 Ton Alloy Hooks, and Snap Hooks. These are also available in a Swivel.

Stable Braid

FEATURES:

- High wear and heat resistance
- Excellent flex-fatigue service life
- Firm flexibility
- Low working elongation
- Sizes above 5/8" have a Pro-Gard marine finish and conform to U.S. Military specification #MIL-KTL-24677

APPLICATIONS:

- Traction winch tow lines
- Constant tension winch mooring lines
- Secondary mooring lines
- Deep water anchoring or lifting lines

SPECIFICATIONS:

Specific Gravity: 1.38
 Elastic Elongation Percentage:
 A % of break strength
 10% 1.1%
 20% 1.7%
 30% 2.7%

Size Diameter	Size Circum.	Weight Per 100 Ft.	SRT MBS*	Size Diameter	Weight Per 100 M	SRT MBS*	ISO/BS EN919 MBS
IN	IN	LBS	LBS	MM	KG	MT	MT
1/4	3/4	2.1	2,000	6	3.1	0.89	0.99
5/16	1	3.2	3,100	8	4.8	1.4	1.5
3/8	1-1/8	4.5	4,800	9	6.7	2.2	2.4
7/16	1-1/4	6.1	6,500	11	9.1	3.0	3.3
1/2	1-1/2	8.2	8,800	12	12.2	4.0	4.5
9/16	1-3/4	11	11,300	14	16.4	5.1	5.7
5/8	2	14	13,900	16	20.8	6.3	7.0
3/4	2-1/4	18.0	17,300	18	26.8	7.9	8.7
7/8	2-3/4	27.1	25,400	22	40.3	11.5	12.8
1	3	34.0	33,300	24	50.6	15.1	16.8
1-1/8	3-1/2	45.3	41,000	28	67.4	18.6	20.6
1-1/4	3-3/4	53.9	48,700	30	80.2	22.1	24.5
1-5/16	4	60.8	55,000	32	90.5	24.9	27.7
1-1/2	4-1/2	73.3	63,800	36	109.0	29.0	32.2
1-5/8	5	85.9	74,100	40	128.0	33.	37.4
1-3/4	5-1/2	104.0	88,400	44	155.0	40.1	44.6
2	6	124.0	105,000	48	185.0	47.8	53.1
2-1/8	6-1/2	147.0	123,000	52	219.0	55.9	62.1
2-1/4	7	173.0	141,000	56	257.0	64.0	71.1
2-1/2	7-1/2	196.0	162,000	60	292.0	73.3	81.4
2-5/8	8	225.0	180,000	64	335.0	81.7	90.8
2-3/4	8-1/2	246.0	199,000	68	366.0	90.2	100.0
3	9	300.0	236,000	72	446.0	107.0	119.0
3-1/4	10	375.0	292,000	80	558.0	132.0	147.0
3-5/8	11	450.0	346,000	88	670.0	157.0	174.0
4	12	525.0	400,000	96	781.0	181.0	201.0
4-1/4	13	589.0	453,000	104	876.0	206.0	228.0
4-5/8	14	689.0	524,000	112	1,025.0	238.0	264.0
5	15	788.0	593,000	120	1,173.0	269.0	299.0

Rope Dia.	Rope Circum.	Min. Tensile Strength	Linear Density
IN	IN	LBS	LB/100 FT
1/4	3/4	1,650	1.5
5/16	1	2,295	2.4
3/8	1-1/8	3,240	3.5
1/2	1-1/2	5,670	6.3
5/8	2	8,910	9.9
3/4	2-1/4	12,780	14.3
1	3	22,230	25.3
1-1/8	3-1/2	28,260	32.2
1-1/4	3-3/4	34,830	39.7
1-1/2	4-1/2	48,600	47.0
1-3/4	5-1/2	66,150	78.0
2	6	84,600	100.0

Rope Dia.	Rope Circum.	Min. Tensile Strength	Linear Density
IN	IN	LBS	LB/100 FT
3/8	1-1/8	2,919	3.3
1/2	1-1/2	4,682	5.6
5/8	2	7,996	8.7
3/4	2-1/4	10,761	12.3
7/8	2-3/4	14,710	16.4
1	3	16,490	20.2
1-1/4	3-3/4	24,899	30.9
1-1/2	4-1/2	25,677	43.5
1-5/8	5	45,276	50.9
1-3/4	5-1/2	50,714	58.3
2	6	56,152	76.1
2-1/4	7	69,145	94.9
2-5/8	8	92,728	129.9
3	9	120,890	-

Rope Dia.	Rope Circum.	Min. Tensile Strength	WLL
IN	IN	LBS	LB/100 FT
1/4	3/4	540	54
5/16	1	900	90
3/8	1-1/8	1,220	122
7/16	1-1/4	1,580	176
1/2	1-1/2	2,380	264
5/8	2	3,960	496
3/4	2-1/4	4,860	695
13/16	2-1/2	5,850	835
7/8	2-3/4	5,950	995
1	3	8,100	1,160
1-1/8	3-1/2	10,800	1,540
1-1/4	3-3/4	12,200	1,740
1-1/2	4-1/2	16,700	2,380
2	6	28,000	4,000

3-Strand Nylon

Strongest rope available, over twice as strong as manila. Plied yarn construction. Highest grade of nylon yarns used in the cordage industry. Regular lay (medium) construction means ease in splicing nylon rope. Heat set yarns minimize shrink and helps nylon rope maintain its lay. High elasticity for energy absorption, but caution must be exercised due to high recoil and breakpoint of nylon rope. Flexible high abrasion resistance, can be stored wet. Is not affected by mildew, oil, grease, gasoline, marine growth or most chemicals.

POLYDAC

The best properties of two comparable fibers, polypropylene and polyester, create a very high-strength, light-weight and competitively priced rope. Polypropylene provides a high-strength, light weight core while the polyester covered yarns provide excellent resistance to abrasion and UV degradation, which extends the service life of the rope. POLYDAC ropes are not subject to deterioration by petroleum products and most chemicals. It will not rot or mildew and 2" (51mm) diameter and larger ropes will float.

Manila

Manila rope is the traditional three-strand rope. Made from natural fiber, which means that it is environmentally friendly. No stretch, holds knots well, and will absorb water. Manila is subject to rot and is not recommended for use where personal safety is at risk; however, Manila rope is great for general industrial applications.

General Cordage Rope Specifications

Size Dia.	Size Circ.	POLYPROPYLENE (17%*)			NYLON (11%*)		
		Weight Per 100 Ft.	Feet Per lb.	Tensile Strength	Weight Per 100 M	Feet Per lb.	Tensile Strength
IN	IN	LBS	FT		LBS	FT	
3/16	5/8	0.7	143	720	1	100	900
1/4	3/4	1.2	83.4	1130	1.5	66.7	1,490
5/16	1	1.8	55.6	1710	2.5	40	2,300
3/8	1-1/8	2.8	35.7	2430	3.5	28.5	3,350
7/16	1-1/4	3.8	26.3	3150	5	20	4,500
1/2	1-1/2	4.7	21.3	3780	6.5	15.4	5,750
9/16	1-3/4	6.1	16.4	4590	8.3	12.3	7,200
5/8	2	7.5	13.3	5580	10.5	9.5	9,350
3/4	2-1/4	10/7	9.3	7650	14.5	6.9	12,800
13/16	2-1/2	12.7	7.9	8910	17	5.9	15,300
7/8	2-3/4	15	6.7	10400	20	5	18,000
1	3	18	5.5	12600	26	3.8	22,500
1-1/16	3-1/4	20.4	4.9	14400	29	3.4	25,900
1-1/8	3-1/2	23.7	4.2	16500	34	2.9	29,700
1-1/4	3-3/4	27	3.7	18900	40	2.5	33,750
1-5/16	4	30.5	3.3	21200	45	2.2	38,750
1-1/2	4-1/2	38.5	2.6	26700	55	1.8	47,700
1-5/8	5	47.5	2.1	32400	68	1.5	58,500
1-3/4	5-1/2	57	1.7	38700	83	1.2	70,200
2	6	69	1.4	46800	95	1.05	83,800
2-1/8	6-1/2	80	1.2	54900	109	0.92	95,500
2-1/4	7	92	1.1	62100	129	0.77	113,000
2-1/2	7-1/2	107	0.93	72000	149	0.67	126,000
2-5/8	8	120	0.83	81000	168	0.59	146,000
2-7/8	8-1/2	137	0.73	90900	189	0.53	162,000
3	9	153	0.65	103000	210	0.47	180,000
3-1/4	10	190	0.53	123000	263	0.38	225,000
3-1/2	11	232	0.43	146000	315	0.32	270,000
4	12	275	0.36	171000	379	0.26	324,000

*Recommended Working Load

General Cordage Rope Specifications

Size Dia.	Size Circ.	POLYPROPYLENE (17%*)			NYLON (11%*)		
		Weight Per 100 Ft.	Feet Per lb.	Tensile Strength	Weight Per 100 M	Feet Per lb.	Tensile Strength
IN	IN	LBS	FT		LBS	FT	
3/16	5/8	1.5	66.6	405	1.2	83.4	900
1/4	3/4	2	50	540	2	50	1,490
5/16	1	2.9	34.5	900	3.1	32.2	2,300
3/8	1-1/8	4.1	24.4	1215	4.5	22.2	3,350
7/16	1-1/4	5.3	19	1575	6.2	16.1	4,500
1/2	1-1/2	7.5	13.33	2385	8	12.5	5,750
9/16	1-3/4	10.4	9.61	3105	10.2	9.8	7,200
5/8	2	13.3	7.5	3960	13	7.7	9,000
3/4	2-1/4	16.7	6	4860	17.5	5.7	11,300
13/16	2-1/2	19.5	5.13	5850	21	4.8	14,000
7/8	2-3/4	22.5	4.45	6930	25	4	16,200
1	3	27	3.71	8100	30.5	3.3	19,800
1-1/16	3-1/4	31.3	3.2	9450	34.5	2.9	23,000
1-1/8	3-1/2	36	2.78	10800	40	2.5	26,600
1-1/4	3-3/4	41.8	2.4	12150	46.3	2.2	29,900
1-5/16	4	48	2.09	13500	52.5	1.9	33,800
1-1/2	4-1/2	60	1.67	16650	66.8	1.5	42,100
1-5/8	5	74.4	1.34	20250	82	1.2	51,300
1-3/4	5-1/2	89.5	1.12	23850	98	1.02	61,000
2	6	108	1.93	27900	118	0.85	72,000
2-1/8	6-1/2	125	0.79	32400	135	0.74	82,800
2-1/4	7	146	0.685	36900	157	0.64	96,300
2-1/2	7-1/2	167	0.59	41850	181	0.55	110,000
2-5/8	8	191	0.52	46800	205	0.49	123,000
2-7/8	8-1/2	215	0.47	52200	230	0.43	139,000
3	9	242	0.42	57600	258	0.39	157,000
3-1/4	10	299	0.33	69300	318	0.31	189,000
3-1/2	11	367	0.27	81900	384	0.26	229,000
4	12	436	0.23	94500	460	0.22	270,000

CAUTION: Working loads are tabulated for rope in good condition in non-official applications and under normal service conditions. Working loads are not applicable where the rope is subjected to dynamic loading or other excessive use. Should the rope fail, it may recoil with considerable force. Persons should be warned against standing in line with the rope.

