

# Synthetic Rope

## 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-DTL-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:  
 At % of break strength  
 10% 1.1%  
 20% 1.7%  
 30% 2.7%

## STABLE BRAID

Size Diameter	Size Circum.	Weight Per 100 Ft.	SRT MBS*	Size Diameter	Weight Per 100 M	SRT MBS*	ISO/BS EN919 MBS
1/4 in.	3/4 in.	2.1 lbs.	2,000 lbs.	6mm	3.1 Kg	0.89 MT	0.99 MT
5/16 in.	1 in.	3.2 lbs.	3,100 lbs.	8mm	4.8 Kg	1.4 MT	1.5 MT
3/8 in.	1-1/8 in.	4.5 lbs.	4,800 lbs.	9mm	6.7 Kg	2.2 MT	2.4 MT
7/16 in.	1-1/4 in.	6.1 lbs.	6,500 lbs.	11mm	9.1 Kg	3.0 MT	3.3 MT
1/2 in.	1-1/2 in.	8.2 lbs.	8,800 lbs.	12mm	12.2 Kg	4.0 MT	4.5 MT
9/16 in.	1-3/4 in.	11.0 lbs.	11,300 lbs.	14mm	16.4 Kg	5.1 MT	5.7 MT
5/8 in.	2 in.	14.0 lbs.	13,900 lbs.	16mm	20.8 Kg	6.3 MT	7.0 MT
3/4 in.	2-1/4 in.	18.0 lbs.	17,300 lbs.	18mm	26.8 Kg	7.9 MT	8.7 MT
7/8 in.	2-3/4 in.	27.1 lbs.	25,400 lbs.	22mm	40.3 Kg	11.5 MT	12.8 MT
1 in.	3 in.	34.0 lbs.	33,300 lbs.	24mm	50.6 Kg	15.1 MT	16.8 MT
1-1/8 in.	3-1/2 in.	45.3 lbs.	41,000 lbs.	28mm	67.4 Kg	18.6 MT	20.6 MT
1-1/4 in.	3-3/4 in.	53.9 lbs.	48,700 lbs.	30mm	80.2 Kg	22.1 MT	24.5 MT
1-5/16 in.	4 in.	60.8 lbs.	55,000 lbs.	32mm	90.5 Kg	24.9 MT	27.7 MT
1-1/2 in.	4-1/2 in.	73.3 lbs.	63,800 lbs.	36mm	109.0 Kg	29.0 MT	32.2 MT
1-5/8 in.	5 in.	85.9 lbs.	74,100 lbs.	40mm	128.0 Kg	33.6 MT	37.4 MT
1-3/4 in.	5-1/2 in.	104.0 lbs.	88,400 lbs.	44mm	155.0 Kg	40.1 MT	44.6 MT
2 in.	6 in.	124.0 lbs.	105,000 lbs.	48mm	185.0 Kg	47.8 MT	53.1 MT
2-1/8 in.	6-1/2 in.	147.0 lbs.	123,000 lbs.	52mm	219.0 Kg	55.9 MT	62.1 MT
2-1/4 in.	7 in.	173.0 lbs.	141,000 lbs.	56mm	257.0 Kg	64.0 MT	71.1 MT
2-1/2 in.	7-1/2 in.	196.0 lbs.	162,000 lbs.	60mm	292.0 Kg	73.3 MT	81.4 MT
2-5/8 in.	8 in.	225.0 lbs.	180,000 lbs.	64mm	335.0 Kg	81.7 MT	90.8 MT
2-3/4 in.	8-1/2 in.	246.0 lbs.	199,000 lbs.	68mm	366.0 Kg	90.2 MT	100.0 MT
3 in.	9 in.	300.0 lbs.	236,000 lbs.	72mm	446.0 Kg	107.0 MT	119.0 MT
3-1/4 in.	10 in.	375.0 lbs.	292,000 lbs.	80mm	558.0 Kg	132.0 MT	147.0 MT
3-5/8 in.	11 in.	450.0 lbs.	346,000 lbs.	88mm	670.0 Kg	157.0 MT	174.0 MT
4 in.	12 in.	525.0 lbs.	400,000 lbs.	96mm	781.0 Kg	181.0 MT	201.0 MT
4-1/4 in.	13 in.	589.0 lbs.	453,000 lbs.	104mm	876.0 Kg	206.0 MT	228.0 MT
4-5/8 in.	14 in.	689.0 lbs.	524,000 lbs.	112mm	1,025.0 Kg	238.0 MT	264.0 MT
5 in.	15 in.	788.0 lbs.	593,000 lbs.	120mm	1,173.0 Kg	269.0 MT	299.0 MT

## NYLON 3-STRAND

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.

## NYLON 3-STRAND

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

## 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 cover 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.

## POLYDAC

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	35,677	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	—

## 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.

### **PURE MANILA**

ROPE DIA.	ROPE CIRCUM.	BREAKING 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	6,950	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

## General Cordage Rope Specifications

		POLYPROPYLENE (17%*)			NYLON (11%*)			MANILA (20%*)			POLYESTER (11%*)				
Size Dia. Inches	Size Circ. Inches	Pounds Per 100 Ft.	Feet Per pound	Tensile Strength	Pounds Per 100 M	Feet Per Pound	Tensile Strength	Size Dia. Inches	Size Circ. Inches	Pounds Per 100 Ft.	Feet Per pound	Tensile Strength	Pounds Per 100 M	Feet Per Pound	Tensile Strength
3/16	5/8	0.7	143	720	1	100	900	3/16	5/8	1.5	66.6	405	1.2	83.4	900
1/4	3/4	1.2	83.4	1130	1.5	66.7	1,490	1/4	3/4	2	50	540	2	50	1,490
5/16	1	1.8	55.6	1710	2.5	40	2,300	5/16	1	2.9	34.5	900	3.1	32.2	2,300
3/8	1-1/8	2.8	35.7	2430	3.5	28.5	3,350	3/8	1-1/8	4.1	24.4	1215	4.5	22.2	3,350
7/16	1-1/4	3.8	26.3	3150	5	20	4,500	7/16	1-1/4	5.3	19	1575	6.2	16.1	4,500
1/2	1-1/2	4.7	21.3	3780	6.5	15.4	5,750	1/2	1-1/2	7.5	13.33	2385	8	12.5	5,750
9/16	1-3/4	6.1	16.4	4590	8.3	12.3	7,200	9/16	1-3/4	10.4	9.61	3105	10.2	9.8	7,200
5/8	2	7.5	13.3	5580	10.5	9.5	9,350	5/8	2	13.3	7.5	3960	13	7.7	9,000
3/4	2-1/4	10.7	9.3	7650	14.5	6.9	12,800	3/4	2-1/4	16.7	6	4860	17.5	5.7	11,300
13/16	2-1/2	12.7	7.9	8910	17	5.9	15,300	13/16	2-1/2	19.5	5.13	5850	21	4.8	14,000
7/8	2-3/4	15	6.7	10400	20	5	18,000	7/8	2-3/4	22.5	4.45	6930	25	4	16,200
1	3	18	5.5	12600	26	3.8	22,500	1	3	27	3.71	8100	30.5	3.3	19,800
1-1/16	3-1/4	20.4	4.9	14400	29	3.4	25,900	1-1/16	3-1/4	31.3	3.2	9450	34.5	2.9	23,000
1-1/8	3-1/2	23.7	4.2	16500	34	2.9	29,700	1-1/8	3-1/2	36	2.78	10800	40	2.5	26,600
1-1/4	3-3/4	27	3.7	18900	40	2.5	33,750	1-1/4	3-3/4	41.8	2.4	12150	46.3	2.2	29,900
1-5/16	4	30.5	3.3	21200	45	2.2	38,750	1-5/16	4	48	2.09	13500	52.5	1.9	33,800
1-1/2	4-1/2	38.5	2.6	26700	55	1.8	47,700	1-1/2	4-1/2	60	1.67	16650	66.8	1.5	42,100
1-5/8	5	47.5	2.1	32400	68	1.5	58,500	1-5/8	5	74.4	1.34	20250	82	1.2	51,300
1-3/4	5-1/2	57	1.7	38700	83	1.2	70,200	1-3/4	5-1/2	89.5	1.12	23850	98	1.02	61,000
2	6	69	1.4	46800	95	1.05	82,800	2	6	108	1.93	27900	118	0.85	72,000
2-1/8	6-1/2	80	1.2	54900	109	0.92	95,400	2-1/8	6-1/2	125	0.79	32400	135	0.74	82,800
2-1/4	7	92	1.1	62100	129	0.77	113,000	2-1/4	7	146	0.685	36900	157	0.64	96,300
2-1/2	7-1/2	107	0.93	72000	149	0.67	126,000	2-1/2	7-1/2	167	0.59	41850	181	0.55	110,000
2-5/8	8	120	0.83	81000	168	0.59	146,000	2-5/8	8	191	0.52	46800	205	0.49	123,000
2-7/8	8-1/2	137	0.73	90900	189	0.53	162,000	2-7/8	8-1/2	215	0.47	52200	230	0.43	139,000
3	9	153	0.65	103000	210	0.47	180,000	3	9	242	0.42	57600	258	0.39	157,000
3-1/4	10	190	0.53	123000	263	0.38	225,000	3-1/4	10	299	0.33	69300	318	0.31	189,000
3-1/2	11	232	0.43	146000	316	0.32	270,000	3-1/2	11	367	0.27	81900	384	0.26	229,000
4	12	275	0.36	171000	379	0.26	324,000	4	12	436	0.23	94500	460	0.22	270,000

\* Recommended Working Load

CAUTION: Working loads are tabulated for rope in good condition in non-critical 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.