TABLE 21-A. BREAKING STRENGTHS AND SAFE LOADS OF MANILA, NYLON, DACRON, POLYPROPYLENE, THREE-STRAND, STANDARD LAY ROPE

Diam (in)	Circumference (in)	Average weight per 100 ft (pounds)				*Average breaking strength (pounds)			
		Manila	Nylon	Dacron	Polypro	Manila	Nylon	Dacron	Polypro.
3/16	5/8	1 5	1 0	1 35	71	450	1,100	860	800
1/4	3/4	2 0	1 6	2 16	1 10	600	1,850	1,380	1,300
5/16	1	2 9	2 6	3 1	1 84	1,000	2,850	2,100	1,900
3/8	1 1/8	4 1	3 8	4 3	2 85	1,350	4,000	2,950	2,750
7/16	1 1/4	5 3	5 4	6 5	3 70	1,750	5 500	4,100	3,500
15/32	1 3/8	6 2				2,250			
1/2	1 1/2	7 5	6 5	8 2	4 75	2,650	6,200	5,300	4,200
9/16	1 3/4	10 4	8 5	10 2	6 1	3,450	8,350	6,800	5,000
5/8	2	13 3	10 5	13 3	7 7	4,400	10,500	8,800	5,800
3/4	2 1/4	16 7	15 0	17 4	11 0	5,400	14 200	12 000	8,200
13/16	2 1/2	19 5				6,500			
7/8	2 3/4	22 5	20 5	25 0	15 4	7,700	19 000	18 300	11,500
1	3	27 0	27 0	30 5	18 7	9,000	24,600	19,800	14,000
1 1/16	3 1/4	31 3				10,500			
1 1/8	3 1/2	36 0	35 0	40 5	23 7	12,000	34,000	25,900	18,300
1 1/4	3 3/4	41 8	40 0	45 0	27 2	13,500	38,000	27,600	20,700
1 5/16	4	48 0	45 0	54 4	30 8	15,000	43,000	29,300	23,500
1 1/2	4 1/2	60 0	56 0	67 0	39 0	18 500	55,000	41,400	29,700
1 5/8	5	74 4	67 0	82 0	47 9	22,500	64,000	49,800	36,300
1 3/4	5 1/2	89 5	79 5	99 0	58 3	26,500	77,500	61,200	43,900
2	6	108	98 0	117 0	69 0	31,000	91,000	73,200	53,000
2 1/8	6 1/2	125	110 0	138 0	81 7	36,000	105,000	84,200	62,000
2 1/4	7	146	130 0	159 0	93 5	41,000	125,000	97,200	70,000
2 1/2	7 1/2	167	150 0	182 0	108 0	46,500	145,000	111,000	80,500
2 5/8	8	191	165 0	205 0	121 0	52,000	165,000	123 600	90,000
2 7/8	8 1/2	215			137 0	58,000			102,000
3	9	242	210 0	260 0	153 0	64,000	205,000	156 000	114,000
3 1/4	10	299	260 0	315 0	191 0	77,000	250,000	192,000	137,000
3 5/8	11	367	310 0	380 0	232 0	91,000	300,000	234 000	162,000
4	12	436	370 0	455 0	275 0	105,000	350,000	276,000	190,000

*Recommended safe working load is 20% of the minimum breaking strength.

Care of rope

Rope should be cleaned before being stored It may be washed with a moderate hose stream, and remaining dirt may be shaken out when the rope has dried

Rope deteriorates if saturated with water and not properly dried A wet rope should be hung up or laid in a loose coil in a dry place until it is thoroughly dry A wet rope should never be left where it may freeze Rope should not be left in contact with radiators, steam pipes, or other sources of heat, which may dry out the oil in the fiber Alternate wetting and drying causes more rapid deterioration than constant wetness

The use of wet rope or of rope reinforced with metallic strands near power lines and other electrical equipment is dangerous

The adding of twists to rope, or removal of twists, destroys its balance, increased twist also causes a rope to kink Removal of turns in the rope may cause the strands to backturn, and, if loads are then applied, the rope may be permanently damaged Periodic balancing of the twist will lengthen rope life

If a fiber rope is well made and given proper care, lubrication other than that