



Stringing Lines & Winch Lines

non-conductive and lightweight synthetic fiber rope solutions

Non-conductive and lightweight, our synthetic lines enable safer operations on critical infrastructures of all sizes around the world—from high voltage transmission lines to local distribution lines. Synthetic rope solutions offer greater safety, lightweight benefits, and reduced wear and tear on winches compared to wire cable. They also do not store energy like steel cables, and in the event of a failure are much less likely to result in severe injuries caused by the recoil of broken wire cables.

Plasma® 12-Strand—a patented product only manufactured by Cortland—is the highest strength synthetic fiber rope available. Manufactured from high performance Honeywell Spectra 900® Fiber, this unique product has been enhanced by Cortland's patented manufacturing process. Plasma 12-Strand can be braided into our patented 12x12 construction, creating a torque-free rope at unparalleled strength for its weight. High strength synthetic fiber stringing lines and winch lines can also be constructed from Spectra® 12-Strand, Vectran® 12-Strand, polyester and composite options.

Whether your solution requires high strength, low stretch, heat or abrasion resistance, Cortland manufactures the best utility rope solutions for winch, transmission, distribution and stringing lines. Email: cortland@cortlandcompany.com or call 360 293 8488.

Major advantages of synthetic fiber lines

- Equally strong to steel
- Significantly lighter
- Easier handling
- Safer
- Reduced cost
- Improved performance



Stringing Lines & Winch Lines

Dia.	Circ.	Plasma®		Toro™		Spectra® 12-Strand		D/Z Composite		Polyester Double Braid		Polyester 12-Strand		Vectran® 12-Strand	
		Min. Strength Lbs.	Weight Lbs. per 100-ft.	Min. Strength Lbs.	Weight Lbs. per 100-ft.	Min. Strength Lbs.	Weight Lbs. per 100-ft.	Min. Strength Lbs.	Weight Lbs. per 100-ft.	Min. Strength Lbs.	Weight Lbs. per 100-ft.	Min. Strength Lbs.	Weight Lbs. per 100-ft.	Min. Strength Lbs.	Weight Lbs. per 100-ft.
3/8"	1-1/8"	17,500	3.7	17,500	3.6	13,900	3.7	12,300	4.4	4,800	4.8	6,100	4.2	17,500	5.3
7/16"	1-1/4"	21,000	4.2	22,000	4.8	14,800	4.2	17,000	6.0	6,300	6.3	9,000	6.3	21,000	6.1
1/2"	1-1/2"	31,300	6.4	30,500	6.1	22,500	6.4	20,900	8.1	8,400	8.6	10,900	8.5	31,300	9.2
9/16"	1-3/4"	37,900	7.9	36,500	7.6	27,700	7.9	27,100	10.3	10,750	11.1	13,600	10.1	37,900	11.4
5/8"	2"	51,400	10.6	47,800	9.4	36,600	10.6	37,100	12.3	12,300	13.1	17,500	13.1	51,400	15.3
3/4"	2-1/4"	68,500	13.3	61,800	13.5	43,200	13.3	43,100	15.5	17,400	18.8	21,900	17.2	68,500	19.2
7/8"	2-3/4"	92,600	19.6	84,300	18.5	61,000	19.6	64,000	23.6	24,000	25.6	28,500	25.8	92,600	28.3
1"	3"	110,000	23.4	105,000	23.7	72,000	23.4	76,800	29.4	31,200	33.5	41,000	34.5	110,000	33.8
1-1/8"	3-1/2"	147,000	31.9	137,000	30.3	91,800	31.9	88,400	33.8	39,500	42.4	47,500	40.0	147,000	46.0
1-1/4"	3-3/4"	165,000	36.2	157,000	37.2	102,600	36.2	104,900	40.9	48,100	52.3	56,700	44.5	165,000	52.2
1-5/16"	4"	196,000	41.7	176,400	41.1	114,300	41.7	116,800	48.3	53,100	57.8	59,800	53.1	196,000	60.2
1-1/2"	4-1/2"	221,000	51.7	215,000	53.8	141,300	51.7	138,500	59.9	64,300	75.4	69,800	69.0	221,000	74.6

NOTE: Tensile strengths are determined in accordance with Cordage Institute Standard 1500-Test Methods for Fiber Rope. All strengths are obtained by testing rope with standard eye splices. Certificates of Compliance are supplied at no charge if requested when placing an order. Larger sizes of any rope construction are available on request.

Plasma® is the highest strength synthetic rope available. Plasma is manufactured from Honeywell Spectra® fiber that has been enhanced by our patented manufacturing process. This process is especially effective in medium to large diameter ropes where strengths are over 50% higher and creep is significantly less than that of standard Spectra® 12-Strand. Plasma comes standard with a polyurethane finish and is easily spliced using a simple tuck splice procedure. Its soft torque-free braided construction provides easy handling.

Toro™ is manufactured from ultra-high-molecular-weight polyethylene (UHMWPE) and is an excellent wire rope replacement with low stretch, superior flex fatigue and wear resistance. Toro is delivered standard with a polyurethane finish and is easily spliced using a simple lockstitch bury splice, or tuck splice. Its soft, torque free braided construction provides easy handling and inspection.

Spectra® 12-Strand provides very high strength, low stretch and excellent abrasion resistance in a single braid construction. Spectra® 12-Strand is over 3 times as strong and less than 1/2 of the elongation of a polyester rope of the same weight. Spectra® 12-Strand comes standard with a polyurethane finish and is easily spliced using a simple tuck splice procedure. Its soft, torque-free braided construction provides easy handling.

D/Z Composite is a double braided rope with the inner core made of UHMWPE and the outer sleeve of polyester. D/Z Composite has very low elongation, high strength and the feel and handling of polyester double braid. It is identified with four external black markers.

Polyester Double Braid provides an excellent combination of high strength, low stretch, excellent weathering and easy handling. Of all the popular fibers polyester has the best weathering characteristics and the best wet abrasion resistance. Polyester Double Braid comes standard with an overlay marine finish and is available on special order with a spliceable polyurethane finish in clear or any of six colors.

Polyester 12-Strand has the lowest stretch and highest strength of all polyester constructions. Its torque-free braided construction provides easy handling and prevents kinks and hockles. Polyester 12-Strand comes standard with a clear polyurethane finish and is easily spliced using a simple lockstitch type splice.

Vectran® 12-Strand is a high strength, low elongating heat-resistant single braided rope construction. It comes standard with either a wax marine finish or a polyurethane coating. Vectran® 12-Strand has excellent bend and flex fatigue resistance and has virtually no creep under sustained loads. It is easily spliced using a tuck splice procedure. Its soft, torque-free braided construction provides easy handling.