

CATALOG

INDUSTRIAL SAFETY &



CORTLAND
INTERNATIONAL™



STRENGTH, SAFETY, AND PERFORMANCE

When safety, strength, and dependable performance matter most, Cortland International delivers engineered solutions designed for the world's most demanding industrial applications. Our comprehensive Industrial & Safety portfolio includes high-performance ropes, lifting slings, safety netting, vehicle recovery systems, and engineered accessories; all developed to perform in harsh environments where reliability is critical.

From everyday industrial operations to specialized lifting, recovery, and safety applications, our products combine advanced materials, proven engineering, and manufacturing expertise to help customers improve safety, increase efficiency, and maximize long-term performance.



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PRECISION-ENGINEERED ROPE SOLUTIONS

For more than 40 years, Cortland International has engineered high-performance synthetic rope, netting and lifting solutions for the world's most demanding applications. Combining advanced fiber technology, in-house engineering expertise and state-of-the-art manufacturing, we deliver reliable, durable and application-specific solutions that perform when it matters most.

Every product is backed by rigorous design, testing and quality assurance processes, ensuring consistent performance and compliance with internationally recognized standards.

Quality Built into Every Product

Quality is integrated throughout every stage of our manufacturing process—from raw material qualification through finished product testing—to ensure every solution delivers dependable performance in the field.

Yarn Qualification Testing

Every yarn batch is evaluated for:

- Breaking strength
- UV resistance
- Elongation characteristics
- Denier consistency
- Color consistency

Rope Performance Testing

Every finished rope is verified for:

- Breaking strength
- Rope balance
- Dimensional accuracy
- Weight consistency

Certified Quality

Cortland products are manufactured under stringent quality management systems and tested to meet internationally recognized industry standards, providing customers with confidence in every solution.



Dynamic Testing

Our purpose-built testing facility is capable of dynamic testing up to 300 tons, with products tested in accordance with ISO 2307:2010 to validate performance under demanding operating conditions.



Static Load Testing

Comprehensive static pull testing verifies strength, structural integrity and long-term performance across a wide range of application requirements.



TUF HOTLINE

Tuf Hotline is a high-performance rope specifically engineered for OPGW (Optical Ground Wire) line stringing applications in the transmission sector. OPGW cables are installed in overhead power lines and serve a dual-function: electrical grounding and fiber-optic communication. Tuf Hotline is designed to support these installations with lightweight durability, balanced construction, and superior handling characteristics.

Each rope is precision-stretched and balanced to ensure long-lasting performance. Options include 8" factory-spliced eyes on both ends or customized terminations based on specific project requirements.

Features

- High breaking strength
- Lightweight construction
- Excellent abrasion resistance
- Easy to handle
- Water-resistant
- Low elongation
- Diameter tolerance: 10mm to 14mm ($\pm 7\%$); 16mm and above $\pm 5\%$

Benefits

- Made from polyolefin, a non-conductive material ideal for high-voltage environments
- Naturally resistant to electricity and moisture
- Does not absorb water, maintaining its strength even in wet conditions
- Special abrasion-resistant coating extends rope lifespan
- Maintains full strength in wet conditions (nylon can lose up to 10%)
- Offers a 15% weight advantage compared to traditional nylon double braid ropes
- Compact, double-braid-like construction ensures balanced and stable deployment



options include 8" factory-spliced eyes



Size	Coil Weight		Min. Breaking Load	
			Unspliced	Spliced/LDBF
mm	kg/100 mtr	kg/200 mtr	Kgf	Kgf
12	7.80	15.60	3100	2790
14	10.20	20.40	4300	3870
16	13.30	26.60	5600	5040
18	16.90	33.80	7100	6390
20	20.90	41.80	8700	7830
22	25.20	50.40	10500	9450
24	30.00	60.00	12500	11250
26	35.50	71.00	14700	13230
28	41.50	83.00	17100	15390
30	48.00	96.00	18900	17010
32	55.00	110.00	21400	19260
34	63.50	127.00	24000	21600
36	71.50	143.00	26500	23850
38	80.00	160.00	29200	26280
40	89.00	178.00	32100	28890



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.

Whether your solution requires high strength, low stretch, heat or abrasion resistance, Cortland International manufactures the best utility rope solutions for winch, transmission, distribution and stringing lines.

Major advantages of synthetic fiber lines

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

Email us at
contact@cortlandinternational.com
or visit our website at
cortlandinternational.com
for more information.



		Plasma®		Toro®		D/Z Composite		Polyester Double Braid		Polyester 12-Strand		Vectran® 12-Strand	
Dia.	Circ.	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	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	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	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	27,100	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	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	43,100	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	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	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	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	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	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	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 especially effective in medium to large diameter ropes where strengths are over 50% higher and low creep is desired. 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.

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.



INDUSTRIAL ROPE

Cortland International's industrial ropes are engineered to deliver reliable performance across demanding operational environments. Manufactured using advanced synthetic fibers, these ropes offer an optimal balance of strength, durability, and ease of handling, making them well-suited for applications where consistency and safety are critical. Designed to perform under varying loads and environmental conditions, our rope solutions support efficient operations while maintaining long-term reliability.

Features & Benefits

- UV resistant
- Lightweight
- High breaking strength
- Long lasting
- Resistant to rotting, mildew and marine organisms
- Unaffected by acids and alkalis
- Controlled elongation

Applications

- Ropes for submersible pumps
- Transportation ropes
- Lifting and material handling ropes
- Power transmission ropes

Nominal Diameter		Size (circ.)	Approximate Weight		Min. Tensile Spliced		Minimum Tensile Unspliced	
inch	mm	inch	lbs/100ft	kgs/100m	lbs.	MT (tonnes)	lbs.	MT (tonnes)
3/19	4	1/2	0	1	567	0.26	630	0.29
14/79	4.5	5/9	1	1	720	0.33	798	0.36
3/16	5	4/7	1	1	861	0.39	956	0.43
1/4	6	3/4	1	2	1214	0.55	1349	0.61
5/16	8	1	2	3	2024	0.92	2248	1.02
3/8	9	1 1/8	2	4	2541	1.15	2811	1.27
37/94	10	1 1/4	3	5	3035	1.38	3373	1.53
1/2	12	1 1/2	4	7	4295	1.95	4767	2.16
9/16	14	1 3/4	6	9	5666	2.57	6296	2.86
5/8	16	2	8	12	7600	3.45	8432	3.82
3/4	18	2-1/4	10	15	9106	4.13	10118	4.59
13/16	20	2-1/2	12	18	11332	5.14	12591	5.71
7/8	22	2-3/4	15	22	13558	6.15	15065	6.83
1	24	3	17	26	16189	7.34	17988	8.16
1-1/16	26	3-1/4	21	31	18212	8.26	20236	9.18
1-1/8	28	3-1/2	24	35	21450	9.73	23833	10.81
1-1/4	30	3-3/4	27	41	23833	10.81	26532	12.03
1-5/16	32	4	31	46	26756	12.13	29679	13.46
1-1/2	36	4-1/2	39	59	34401	15.60	38223	17.33
1-5/8	40	5	49	72	40472	18.35	44969	20.39
1-3/4	44	5-1/2	59	88	50590	22.94	56211	25.49
2	48	6	70	104	56661	25.70	62956	28.55
2-1/8	52	6-1/2	82	122	67903	30.79	75323	34.16
2-1/4	56	7	95	142	75997	34.47	84316	38.24
2-1/2	60	7-1/2	109	163	86115	39.05	95559	43.34
2-5/8	64	8	124	185	101180	45.89	112422	50.99
3	72	9	157	234	121416	55.06	134906	61.18
3-1/4	80	10	194	289	151770	68.83	168633	76.48
3-5/8	88	11	235	350	182124	82.60	202359	91.77
4	96	12	280	417	214501	97.28	238334	108.09
4-1/4	104	13	328	489	252949	114.72	281055	127.46
4-5/8	112	14	381	567	283303	128.48	314781	142.76
5	120	15	437	651	323775	146.84	359750	163.15
5-1/4	128	16	497	741	364247	165.19	404719	183.55
5-5/8	136	17	561	836	404719	183.55	449688	203.94
6	144	18	629	937	453285	205.57	503650	228.41
6-5/8	160	20	779	1160	566607	256.96	629563	285.52

Tensile strengths are determined in accordance with Cordage Institute 1500.2. Test Methods for Fiber Rope. Minimum Tensile Strength (MTS) published assumes spliced eye terminations at each end of the rope. Weights actually calculated at linear density under stated preload (200d²) plus 4%. Diameter and circumference size published is nominal and reflects rope size after loading (10 cycles) to 50% of MTS.



SUPERTUF

Supertuf 3-Strand ropes are manufactured from high strength polyolefin fiber. These ropes have a high strength to weight ratio, float and do not absorb water. Additionally, they have high resistance to abrasion and chemicals.

Features & Benefits

- Floats
- Good strength to weight

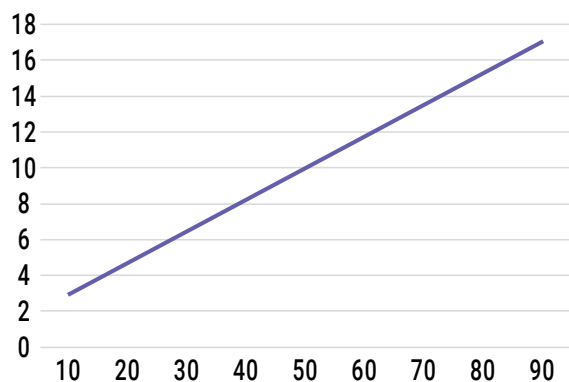
Applications

- Aquaculture
- Fishing
- Submersible pumps

Nominal Diameter	Size (circ in.)	Approximate Weight		Minimum Tensile Strength Spliced Rope/LDBF		Minimum Tensile Strength ISO Unspliced Rope	
		lbs/100ft	kg/100m	lbs	MT (tonnes)	lbs	MT (tonnes)
6	3/4	1.10	1.63	1367	0.62	1520	0.69
8	15/16	1.95	2.90	2360	1.07	2630	1.19
10	1-1/8	3.04	4.53	3642	1.65	4047	1.84
12	1-1/2	4.38	6.52	5148	2.34	5710	2.59
14	1-3/4	5.97	8.88	6744	3.06	7644	3.47
16	2	7.79	11.60	8813	4.00	9779	4.44
18	2-1/4	9.88	14.70	11016	5.00	12252	5.56
20	2-1/2	12.16	18.10	13399	6.08	14882	6.75
22	2-3/4	14.72	21.90	16006	7.26	17782	8.07
24	3	17.54	26.10	18772	8.51	20862	9.46
26	3-1/4	20.56	30.60	21649	9.82	24055	10.91
28	3-1/2	23.85	35.50	24954	11.32	27652	12.54
30	3-3/4	27.42	40.80	28326	12.85	31473	14.28
32	4	31.18	46.40	31698	14.38	35295	16.01
36	4-1/2	39.44	58.70	39342	17.85	43613	19.78
40	5	48.72	72.50	47435	21.52	52605	23.86
44	5-1/2	58.93	87.70	55978	25.39	62272	28.25
48	6	69.88	104.00	65869	29.88	73063	33.14
52	6-1/2	81.98	122.00	75986	34.47	84528	38.34
56	7	95.42	142.00	86776	39.36	96443	43.75
60	7-1/2	109.53	163.00	98242	44.56	109257	49.56
64	8	124.99	186.00	110157	49.97	122296	55.47
68	8-1/2	141.11	210.00	123196	55.88	136909	62.10
72	9	157.91	235.00	136909	62.10	152196	69.04
80	10	194.87	290.00	165460	75.05	183894	83.41
88	11	235.86	351.00	199406	90.45	221437	100.44
96	12	280.21	417.00	236050	107.07	263027	119.31

Tensile strengths are determined in accordance with Cordage Institute 1500.2. Test Methods for Fiber Rope. Minimum Tensile Strength (MTS) published assumes spliced eye terminations at each end of the rope. Weights actually calculated at linear density under stated preload (200d²) plus 4%. Diameter and circumference size published is nominal and reflects rope size after loading (10 cycles) to 50% of MTS.

Supertuf 3-Strand Elongation (%)



Technical Information

Specific gravity	0.92
Melting point	329°F (165°C)
Critical temp.	158°F (70°C)
Coefficient of friction	0.12–0.15*
Elongation at break	11.5%
Fiber water absorption	0–1%
UV resistance	good
Wet abrasion	good
Dry abrasion	good

* value based on data supplied by the fiber manufacturer for new, dry fiber

NYLOTUF

NyloTuf 3-Strand ropes are manufactured from polyamide multi-filament rope. These ropes have a high strength for heavy-duty applications.

Features & Benefits

- High shock absorption
- Resistant to abrasion and deterioration
- High elongation
- High elasticity
- Durable
- High melting point
- Sinks in water

Note

- Standard coil length: 220 mtrs
- Safety factor: 1/9th of minimum breaking load
- The minimum breaking load (MBL) should never be considered as the safe working load of the rope. Breaking load quoted refers to the new dry ropes in soft lay construction; in wet conditions these values may be lower
- All values listed are as per results confirmed accordance to test procedures IS 7071
- Cortland International reserves the right to review/ after product specifications
- Please contact us for more information regarding longer lengths, different packing and any other customization required

Applications

- Safety and anchor lines
- Hoisting, rigging, safety and nursery
- Mooring and barge lines
- Industrial slings for heavy loads
- Surge lines
- Mountain climbing

Nominal Diameter		Size (circ in.)	Runnage	Weight/220 Mtrs. Coil	Minimum Breaking Load
mm	in.		Mtrs./K	Kgs	KGF
6	1/4	3/4	44.44	4.95	750
8	5/16	1	25.00	8.80	1345
10	3/8	1-1/8	16.17	13.60	2088
12	1/2	1-1/2	11.22	19.60	2995
14	9/16	1-3/4	8.20	26.80	4095
16	5/8	2	6.28	35.00	5300
18	3/4	2-1/4	5.00	44.00	6695
20	13/16	2-1/2	4.07	54.00	8300
22	7/8	2-3/4	3.33	66.00	10000
24	1	3	2.82	78.00	12000
26	1-1/16	3-1/4	2.38	93.40	13950
28	1-1/8	3-1/2	2.05	107.00	15800
30	1-1/4	3-3/4	1.80	122.10	17755
32	1-5/16	4	1.58	139.00	20000
36	1-7/16	4-1/2	1.25	176.00	24900
40	1-5/8	5	1.00	218.00	30000
44	1-3/4	5-1/2	0.83	264.00	35800
48	2	6	0.70	312.00	42000

Tolerance (weight/220 mtrs. coil):

4mm to 8mm: +/-10%, 10mm to 14mm: +/-8%, 16mm and above: +/-5%

PLASMA®

Cortland's Plasma ropes are the culmination of 25+ years of engineering expertise in the HMPE industry. Our dedication to providing customers with industry-leading synthetic line is and always has been the goal. Our continued innovation and unwavering desire are to provide the strongest and most reliable product available.

Plasma® is supplied with our standard polyurethane finish, although other coatings can be applied to suit specific applications. Its soft, torque free braided construction provides easy handling.

Features & Benefits

- World's strongest rope for its weight
- Long lengths available
- High flex fatigue and abrasion resistance
- Easy to splice, inspect, and repair
- Neutrally buoyant in water
- Select sizes are ABS & DNV type approved
- Sizes 40mm–64mm are MEG4 approved

Applications

- Tug vessel assist lines
- Vessel mooring lines
- Offshore working ropes
- Lashings
- Replacement for wire rope heavy lift slings

Type approved product



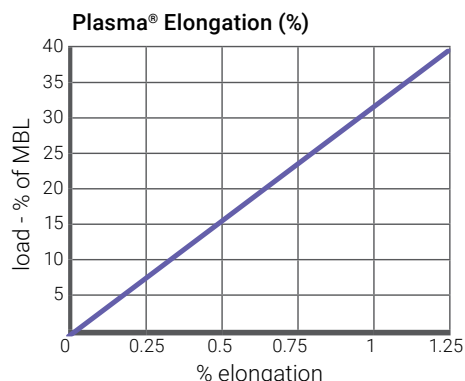
Technical Information

Specific gravity	0.98*
Melting point	284°F (140°C)
Critical temp.	150°F (65°C)
Coefficient of friction	0.09–0.12*
Elongation at break	3%–4%
Fiber water absorption	0%
UV resistance	excellent
Wet abrasion	excellent
Dry abrasion	excellent

* value based on data supplied by the fiber manufacturer for new, dry fiber

Nominal Diameter		Size (circ in.)	Approximate Weight		Minimum Tensile Strength Spliced Rope/LDBF		Minimum Tensile Strength ISO Unspliced Rope	
inch	mm		lbs/ 100ft	kg/ 100m	lbs	MT (tonnes)	lbs	MT (tonnes)
Plasma 12-Strand								
3/8	9	1-1/8	3.7	5.5	17,500	7.9	19,400	8.8
ABS and DNV type approved sizes – up to 4” diameter (96 mm)								
7/16	11	1-1/4	4.2	6.3	21,000	9.5	23,400	10.6
1/2	12	1-1/2	6.4	9.5	31,300	14.2	34,800	15.8
9/16	14	1-3/4	7.9	11.8	37,900	17.2	42,100	19.1
5/8	16	2	10.6	15.8	51,400	23.3	57,100	25.9
3/4	18	2-1/4	13.3	19.8	68,500	31.1	76,300	34.6
13/16	20	2-1/2	15.9	23.7	74,000	33.6	82,200	37.2
7/8	22	2-3/4	19.6	29.2	92,600	42.0	102,900	46.7
1	24	3	23.4	34.8	110,000	49.9	122,100	55.4
1-1/16	26	3-1/4	27.5	40.9	129,200	58.6	143,500	65.1
1-1/8	28	3-1/2	31.9	47.5	147,000	66.7	163,300	74.1
1-1/4	30	3-3/4	36.2	53.9	165,000	74.9	183,100	83.1
1-5/16	32	4	41.7	62.1	196,000	88.9	217,800	98.8
1-1/2	36	4-1/2	51.7	76.9	221,000	100.3	245,500	111.3
Plasma 12x12								
1-5/8	40	5	66	98	291,000	132	323,300	147
1-3/4	44	5-1/2	78	117	314,000	142	348,900	158
2	48	6	91	136	355,000	161	392,450	178
2-1/8	52	6-1/2	109	162	428,000	194	475,600	216
2-1/4	56	7	122	182	481,000	218	534,400	242
2-1/2	60	7-1/2	148	220	530,000	240	588,900	267
2-5/8	64	8	167	249	596,000	270	662,200	300
2-3/4	68	8-1/2	187	278	660,000	299	733,300	333
3	72	9	214	319	780,000	354	866,700	393
3-1/8	76	9-1/2	235	350	850,000	386	944,400	428
3-1/4	80	10	261	388	940,000	426	1,045,400	474
3-1/2	84	10-1/2	298	443	1,108,000	503	1,231,000	559
3-5/8	88	11	324	482	1,250,000	567	1,388,900	630
3-3/4	92	11-1/2	343	510	1,317,000	598	1,463,000	664
4	96	12	394	586	1,520,000	690	1,689,000	766
4-1/8	100	12-1/2	457	679	1,622,000	736	1,802,000	818
4-1/4	104	13	514	765	1,697,000	770	1,886,000	856
4-1/2	108	13-1/2	530	789	1,827,000	829	2,030,000	921
4-5/8	112	14	546	812	1,880,000	853	2,089,000	948
4-3/4	116	14-1/2	587	873	1,927,000	874	2,141,000	971
5	120	15	606	902	2,069,500	939	2,299,000	1043
5-1/8	124	15-1/2	657	978	2,212,000	1004	2,458,000	1115
5-1/4	128	16	703	1046	2,355,000	1069	2,617,000	1187
5-1/2	132	16-1/2	749	1114	2,497,500	1133	2,775,000	1259
5-5/8	136	17	813	1210	2,640,000	1198	2,933,000	1331

Larger and/or smaller sizes and custom designs are available upon request.



Size: Diameter and circumference are nominal. A new unused rope in relaxed state will measure larger; loading and use compacts ropes, sets splices and lessens rope size. This is especially prevalent in sizes above 4" diameter. Published nominal sizes from 4-1/8" and larger represent stabilized or preloaded size. Weights: Published weights of sizes 1-5/8"– 4" diameter are calculated at linear density under stated preload (200d²) plus 4%. For this chart, sizes 4-1/8"–8-1/4" diameter represent un-cycled, (non-stabilized) weights. Tensile Strengths: Tensile strength determined in accordance with Cordage Institute 1500 Test Methods for Fiber Ropes and ISO 2307.

TORO® 12X12

Toro® 12x12 is a 12-strand braided rope in which each of the 12 strands is, in turn, a 12-strand rope, or braided primary strand. Toro is manufactured from high tenacity High Modulus Polyethylene (HMPE).

This construction addresses the most critical properties of the fibers to provide a very high strength translation efficiency for larger ropes. This design allows for long lay lengths, making rope that is more flexible for bending applications, easy to inspect, and can be quickly spliced using standard 12 strand splicing techniques. Toro 12x12 is supplied with our standard polyurethane finish, although other coatings can be applied to suit specific applications.

Features & Benefits

- Highest strength
- Very low stretch
- Lightweight
- Soft hand
- Torque free
- Easy splicing
- Floats
- Long lengths available
- High flex fatigue and abrasion resistance
- Moderate UV resistance
- Easy to inspect and repair
- Neutrally buoyant in water
- Sizes 40mm–64mm are MEG4 approved

Applications

- Tug vessel assist lines
- Vessel mooring lines
- Offshore working ropes
- Lashings
- Replacement for wire rope heavy lift slings

Type approved product



Nominal Diameter		Size (circ in.)	Approximate Weight		Minimum Tensile Strength Spliced Rope/LDBF		Minimum Tensile Strength ISO Unspliced Rope	
inch	mm		lbs/100ft	kg/100m	lbs	MT (tonnes)	lbs	MT (tonnes)
1-5/8	40	5	62.0	92.2	245,000	111	272,100	123
1-3/4	44	5-1/2	72.3	107.6	284,300	129	315,800	143
2	48	6	94.9	141.3	369,900	168	410,900	186
2-1/8	52	6-1/2	108.9	162.0	423,900	192	470,900	214
2-1/4	56	7	121.3	180.5	470,100	213	522,200	237
2-1/2	60	7-1/2	147.9	220.2	569,400	258	632,600	287
2-5/8	64	8	163.8	243.8	630,300	286	700,200	318
2-3/4	68	8-1/2	182.4	271.5	698,400	317	775,900	352
3	72	9	215.4	320.6	819,000	371	909,900	413
3-1/8	76	9-1/2	233.2	347.0	886,500	402	984,900	447
3-1/4	80	10	253.5	377.4	961,300	436	1,068,000	484
3-1/2	84	10-1/2	290.7	432.7	1,095,300	497	1,216,800	552
3-5/8	88	11	314.1	467.6	1,184,300	537	1,315,700	597
3-3/4	92	11-1/2	338.7	504.1	1,273,100	577	1,414,400	641
4	96	12	383.5	570.8	1,435,200	651	1,594,500	723
4-1/8	100	12-1/2	407.0	605.8	1,523,400	691	1,692,400	768
4-1/4	104	13	433.4	645.0	1,618,600	734	1,798,200	816

Size: Diameter and circumference are nominal. A new unused rope in relaxed state will measure larger; loading and use compacts ropes, sets splices and lessens rope size.

Weights: Published weights of sizes 1-5/8"–4-1/4" diameter are calculated at linear density under stated preload (200d²) plus 4%.

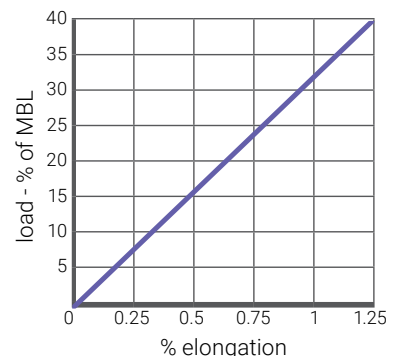
Tensile Strengths: Tensile strength determined in accordance with Cordage Institute 1500-02 Test Methods for Fiber Ropes and ISO 2307.

Technical Information

Specific gravity	0.98*
Melting point	284°F (140°C)
Critical temp.	150°F (65°C)
Coefficient of friction	0.09–0.12*
Elongation at break	3%–4%
Fiber water absorption	0%
UV resistance	excellent
Wet abrasion	excellent
Dry abrasion	excellent

* value based on data supplied by the fiber manufacturer for new, dry fiber

Toro® 12x12 Elongation (%)





SAFETY NETS

High-Performance Fall Protection You Can Trust

Tufsafe™ machine-made safety nets are engineered to deliver dependable fall protection across demanding industrial environments. Designed to absorb and dissipate impact forces, they help reduce injury risk and create a safer, more secure worksite.

Recognized as one of the most trusted and widely used fall protection systems, Tufsafe™ nets combine strength, flexibility, and reliability—allowing workers greater freedom of movement while maintaining critical safety coverage.

Manufactured to meet stringent international safety standards, every Tufsafe™ net undergoes rigorous quality testing to ensure consistent, high-performance results. The outcome is a proven, cost-effective solution for fall prevention across a wide range of applications.

Key Features & Benefits

- High-performance, machine-made PP knotted and braided netting
- Engineered to absorb impact forces and reduce fall-related injuries
- Provides safe working conditions without restricting mobility
- Durable, reliable, and cost-effective fall protection solution
- Manufactured and tested to meet international safety standards

Product Highlights

- Available in braided, twisted, and knotless netting configurations
- High-strength border ropes and tie cords for secure, easy installation
- Heat-treated for enhanced knot integrity and dimensional stability
- Uniform mesh size for consistent performance
- Optional triple-layer construction for high-rise applications

Applications

- Construction
- Cargo handling
- Excavation
- Helipads
- Gangways
- Infrastructure, demolition, and maintenance projects



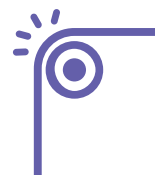
Quality Yarn



Customized as
Per Request



Stability Under
UV Radiation



Resistance to
Abrasion

TRIPLE LAYER BRAIDED NET

Layer 1 & 2 Specifications

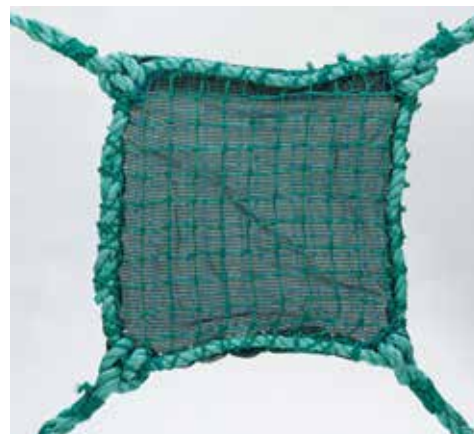
Twine Dia. (mm)	Runnage (meter/Kg) ISO2060	Twine B.S. (Kgf) ISO1805	Knot B.S. (Kgf)
Tolerances	±7%	±5%	±5%
2.5	405	86	120
5	125	240	350

Layer 3 Specifications

Product Description	Runnage (meter/Kg) ISO2060	Bursting Strength (Kgf)
Tolerances	±5%	±5%
Mono Shade Net	115	12

Border Rope Specifications

Product Description	Runnage (meter/Kg) ISO2060	Rope B.S. (Kgf)
Tolerances	±5%	±5%
12mm rope	15	2700



Available in:

- Layer 1–2.5 mm braided netting. 25 mm sq. mesh
- Layer 2–Fish net debris containment netting
- Layer 3– Monofilament containment net
- 25, 30, 35, 40 & 50 mm sq. mesh

DOUBLE LAYER BRAIDED NET

Layer 1 Specifications

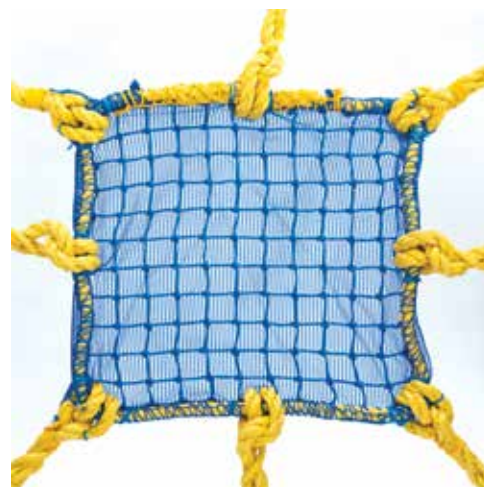
Twine Dia. (mm)	Runnage (meter/Kg) ISO2060	Twine B.S. (Kgf) ISO1805	Knot B.S. (Kgf)
Tolerances	±7%	±5%	±5%
1.5	715	55	70
2	520	65	90
2.5	405	86	120
3	268	120	170
4	200	171	225
5	125	240	350
6	89	380	550
7	74	420	609
8	58	560	812

Layer 2 Specifications

Product Description	Runnage (meter/Kg) ISO2060	Bursting Strength (Kgf)
Tolerances	±5%	±5%
Mono Shade Net	115	12

Border Rope Specifications

Product Description	Runnage (meter/Kg) ISO2060	Rope B.S. (Kgf)
Tolerances	±5%	±5%
12mm rope	15	2700



Available in:

- Layer 1–2.5 mm braided netting
- Layer 2–Monofilament debris containment netting

DOUBLE LAYER PP KNOTTED NET

Layer 1 Specifications

Twine Dia. (mm)	Runnage (meter/Kg) ISO2060	Twine B.S. (Kgf) ISO1805	Knot B.S. (Kgf)
Tolerances	±7%	±5%	±5%
4	137.5	285	413
5	88.0	433	454
6	61.0	610	884

Layer 2 Specifications

Product Description	Runnage (meter/Kg) ISO2060	Bursting Strength (Kgf)
Tolerances	±5%	±5%
Mono Shade Net	115	12

Border Rope Specifications

Product Description	Runnage (meter/Kg) ISO2060	Rope B.S. (Kgf)
Tolerances	±5%	±5%
12mm rope	15	2700



Available in:

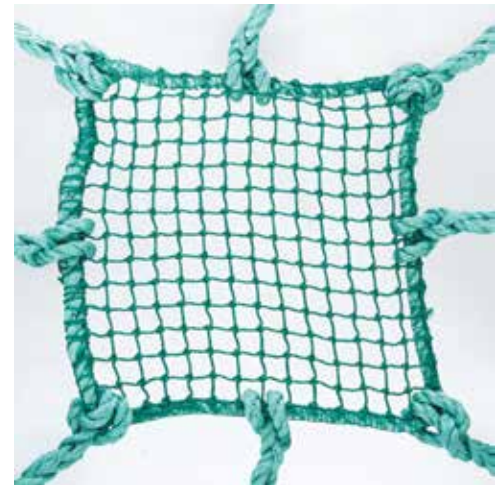
- Layer 1–4 mm polypropylene netting
- Layer 2–Monofilament debris containment netting

SINGLE BRAIDED NET

Twine Dia. (mm)	Runnage (meter/Kg) ISO2060	Twine B.S. (Kgf) ISO1805	Knot B.S. (Kgf)
Tolerances	±7%	±5%	±5%
2.5	405	86	120
5	125	240	350

Border Rope Specifications

Product Description	Runnage (meter/Kg) ISO2060	Rope B.S. (Kgf)
Tolerances	±5%	±5%
12mm rope	15	2700



Available in:

- 2.5 mm braided netting
25 mm sq. mesh
- 5 mm braided netting
100 mm, 110 mm, 120 mm, 130 mm,
140 mm sq. mesh

SINGLE LAYER PP KNOTTED NET

Twine Dia. (mm)	Runnage (meter/Kg) ISO2060	Twine B.S. (Kgf) ISO1805	Knot B.S. (Kgf)
Tolerances	±7%	±5%	±5%
4	137.5	285	413
5	88.0	433	454
6	61.0	610	884

Border Rope Specifications

Product Description	Runnage (meter/Kg) ISO2060	Rope B.S. (Kgf)
Tolerances	±5%	±5%
12mm rope	15	2700



Available in:

- 4 mm rope net.
100 mm sq. mesh



BIRD NET

Cortland International offers premium quality bird protection nets that can be used to prevent birds from entering large buildings, stadiums, and airports. Our nets are made from high-quality materials that are weather and abrasion-resistant, ensuring long lasting performance. These nets are designed to provide superior protection while being easy to install and maintain. Keep birds away from sensitive areas with our reliable and effective bird protection nets.

Twine Dia. (mm)	Ply	Runnage (meter/Kg) ISO2060	Twine B.S. (Kgf) ISO1805	Knot B.S. (Kgf) ISO1805
Tolerances		±7%	±5%	±5%
1	15	1970	16.3	26.1
1.25	18	1640	19.4	31.0



Border Rope Specifications

Rope Dia. (mm)	Runnage (meter/Kg) ISO2060	Rope B.S. (Kgf)
Tolerances	±5%	±5%
4mm Braided	200	171



ENGINEERED SYNTHETIC LIFTING SOLUTIONS

As lifting operations become larger and more complex, synthetic lifting solutions continue to outperform traditional steel wire slings in strength-to-weight ratio, handling, safety, and storage efficiency. Lightweight yet exceptionally strong, synthetic slings reduce manual handling, improve operational efficiency, and enhance safety without compromising lifting performance.

Manufactured from advanced, high-performance fibers, Cortland International's synthetic lifting solutions are engineered for durability in the world's harshest environments. They resist rust, corrosion, and moisture in both freshwater and saltwater applications, while strategically protected wear points provide enhanced resistance to abrasion, cutting, and heat. Designed for long service life, these solutions are also easy to inspect, maintain, and repair, helping reduce downtime and lifecycle costs.

As a pioneer in synthetic fiber braiding technology, Cortland brings more than 25 years of experience engineering certified synthetic lifting solutions for critical lifting applications worldwide. We provide unbiased recommendations and deliver the optimal lifting package based on each application's unique requirements.





TURBINE BLADE LIFTING SLINGS

LIFTING SLINGS FOR WIND TURBINE BLADES

Wind power is one of the cleanest and most environmentally friendly energy sources available today. However, handling advanced wind turbine components presents major logistical challenges. As innovation drives larger blades and turbines, transporting and installing these massive components safely becomes increasingly complex.

Protecting the Blades

Turbine blades are among the most valuable components of a wind turbine. Protecting them during transport — whether on land or at sea—is essential to ensure they arrive at their destination undamaged and ready for installation.

Cortland International's patented soft Turbine Blade Lifting Slings, engineered from high-modulus polyethylene (HMPE) fiber, are tailor-made for the wind energy market. Proven in the field, these slings safely lift and rotate turbine blades without slippage or cracking. Their unique flattened profile distributes the load evenly over a wider surface area, minimizing stress and preventing damage to the blade structure.

Combining patented design with high-performance synthetic fiber technology, Cortland International's Turbine Blade Lifting Slings deliver exceptional strength, durability, and versatility for today's most demanding blade transport and installation projects.

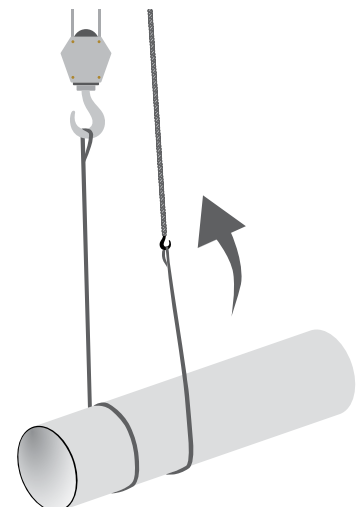
Features

- Lightweight—yet stronger than steel
- Gentle on hands, gentle on blades
- Flatten under load for optimal contact
- Reduce stress on lifted components
- Exceptional flex fatigue and abrasion resistance
- Easy to handle, store, and transport
- Custom-designed for each application

Email contact@cortlandinternational.com for an initial discussion or visit us online at cortlandinternational.com.

Turbine Blade Lifting Sling						
Part No*	Description	Material	Min. Breaking Strength	Weight in Air	Weight in Sea Water	Specific Gravity
SX48-ROTOR10TE	Blade Lifting Sling	High Modulus Polyethylene	154,400 lbs (70 Te)	70.96 lbs/100 ft	-4.2lbs/100ft	0.98

* other sizes available upon request



ROPE LIFTING SLINGS

Cortland International braided rope slings will outlast and outperform synthetic fiber round slings, standard or high performance.

There are many unique ways to fabricate rope into slings, two common methods are:

- single leg (eye-and-eye)
- endless loop (grommets)

Be sure to select the proper sling strength and fabrication configuration for the application.

All Cortland rope slings are proof loaded to 2x rated capacity.

Correct choice of rope lifting sling requires a good understanding of strength, durability, contact lifting points and other possible factors which could affect the lifting sling.

Considerations include:

- Bending fatigue or WLL rated capacity reductions due to connection points (D:d ratios)
- Length tolerances
- Hardware interfaces
- Temperatures greater than 149°F (65°C)

Wear protection can be provided to cover both eye terminations and/or body or portions of the sling body.

Cortland rope slings are tag certified to meet all ASME B30.9 lifting standards (other certification standards met upon request).



Rope Sling Configuration

Just as important as selecting the right fiber and construction, selecting the correct configuration will further enhance the performance of any sling. There are two primary configurations for fiber rope slings:

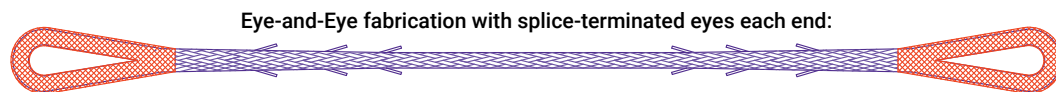
- Eye and Eye
- Endless Grommet

Each configuration has its own features and benefits.

Eye and Eye Slings

When spliced into an eye and eye sling, UHMWPE will essentially act as a size-for-size replacement for a traditional steel wire rope sling in terms of strength. Each end is terminated using a Cortland-approved splice which becomes locked in place after proof load testing.

Due to the splice length and free span requirements as shown in the drawing below, eye and eye slings have minimum length that must be considered. The sling can be made only so short due to the splices.

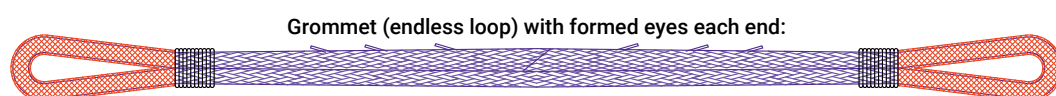
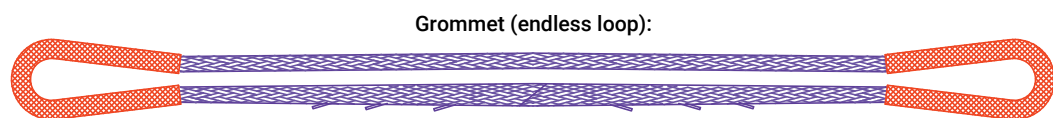


- Minimum D:d ratio in the eyes is 1:1
- Minimum eye length must be 6x the bearing surface diameter or pin diameter, to maintain the vertex angle below 30°
- Rated capacity of eye-and-eye sling in a vertical pull includes splice efficiencies
- When basketing eye and eye slings the rated capacity will be affected when the basket point D:d ratio is less than 25:1

Endless Grommet Slings

Grommets are manufactured by splicing the ends of a rope together to form a continuous loop. Compared to eye-and-eye slings, they have increased strength with little to no increase in the chosen rope diameter due to two (2) legs holding the load. Alternatively, the same load can be held with a smaller rope diameter due to the two (2) legs holding the load.

The breaking strength of endless grommet slings is directly affected by the pin diameter on which they are mounted.



- Grommet sling rated capacity is directly related to the contact curvature on which it will be used
- Grommet sling ultimate strength is based on applying a configuration factor (CF) to the single leg strength to which the rope is made

SELANTIC® HIGH-PERFORMANCE ROUND SLINGS

Custom Designed

Each Selantic® high-performance sling is highly engineered and custom designed for the intended application.

Core Construction

Selantic slings are endless loop grommets made of a parallel laid synthetic fiber construction.

Protective Covers

The selected core material is encased in a protective cover to ensure a durable and long-lasting lift solution. Heavier wear protection is used in the eyes.

Selantic slings can be made as short as one meter and still achieve from 40Te up to 5000Te MBL.

Selantic slings are torque-neutral, with no tendency to rotate under load (if rotation occurs, little strength loss is experienced).

Specialized Hardware

Cortland International offers specialty compliant hardware engineering services with all products. Thimbles, shackles, hooks and spreader bars can all be custom engineered into the initial sling design.



The below highly engineered custom high-performance synthetic roundslings are available as standard but each sling is custom-designed and manufactured according to customer's requirements. They are available in lengths varying from short (0.8m) up to 88m, with different characteristics according to the intended application.

Selantic® High-performance Slings

Part No	Minimum Breaking Load MBL		Minimum Bend Diameter		Sling Eye Diameter		Est. Weight in air	
	lbs	Te	in.	mm	in.	mm	lbs/ft	kg/m
SD35	77,180	35	1.5	37	1.5	37	0.47	0.70
SD50	110,250	50	1.6	41	1.7	43	0.62	0.92
SD75	165,380	75	1.8	46	2.0	52	0.84	1.26
SD100	220,500	100	2.0	51	2.3	58	1.06	1.58
SD150	330,750	150	2.4	62	2.7	68	1.48	2.20
SD200	441,000	200	2.8	72	3.0	76	1.92	2.85
SD300	661,500	300	3.6	92	3.6	91	2.69	4.01
SD400	882,000	400	4.4	111	4.0	102	3.49	5.20
SD500	1,102,500	500	5.1	129	4.3	110	4.31	6.42
SD750	1,653,800	750	6.8	172	5.1	130	6.28	9.34
SD1000	2,205,000	1000	8.2	209	5.7	145	8.32	12
SD1250	2,756,300	1250	9.5	241	6.2	158	10	15
SD1500	3,307,500	1500	10.6	268	6.7	169	12	18
SD1750	3,858,800	1750	11.4	290	7.1	182	14	21
SD2000	4,410,000	2000	12.1	308	7.6	193	16	25
SD2250	4,961,300	2250	12.6	321	8.0	202	19	28
SD2500	5,512,500	2500	13.2	336	8.2	209	21	31
SD2750	6,063,800	2750	13.8	350	8.6	219	23	34
SD3000	6,615,000	3000	14.3	364	8.9	226	25	37
SD3250	7,166,300	3250	14.8	377	9.3	235	27	41
SD3500	7,717,500	3500	15.4	390	9.5	241	29	44

Your Specifications

When ordering, please provide us with as much information as possible to ensure that we provide you with the most cost-effective solution. For example, is heat or chemical resistance an issue? Would it be advantageous for the sling to have a high visibility jacket for subsea applications? Are special friction resistant wear pads required? How will the sling interface with other lifting components? Given this information, we will design, manufacture and deliver exactly the right solution for your needs.



SRS™ HIGH-PERFORMANCE SLINGS



SRS™ high-performance slings from Cortland International feature an endless loop construction (parallel laid endless filaments) of UHMWPE material, enabling these slings to be manufactured with very low elongation under load; and at very high strength. They are available in short lengths, with vertical capacities from 40,000 lbs (18.2Te) to 500,000 lbs (226.8Te); higher capacities are available upon request.

Their lightweight design and equal strength-to-size profile vs. wire rope make these ideal tools for heavy lifts. To protect potential wear areas from abrasion, cutting, or snagging, the core material is encased in a tough protective nylon jacket to ensure a durable and long-lasting lift solution.

Features

- Stronger, safer, and easier to handle than steel
- Lightweight and flexible
- Lengths from 5ft (1.524 m) to 72 ft (22 m); longer lengths available upon request
- Matched slings are easily achieved, +/- 0.25% of nominal length, +/- 0.394 inches (10 mm) between matched sets
- Vertical capacities from 40,000 to 500,000 lbs as standard
- Friendly on painted surfaces or sensitive equipment
- Durable construction
- Repairable or replaceable jacket

All Cortland SRS high-performance slings are proof loaded and length verified and supplied with a proof loading certificate; third party witnessing is available upon request.



SRS™ High-performance Slings are available as standard, in lengths varying from a short 5 ft (1.524 m) up to 72 ft (22 m); please specify length at time of order. Higher capacities and custom designs are available upon request.

SRS™ High-performance Slings—Standard Sizes

Vertical Lift Rating to ASME B30.9 (5:1 WLL)

Part No	Sling Details							
	Approximate Diameter		Weight		Minimum Bending Diameter		Minimum Width	
	inch	mm	lbs/ft	kg/m	inch	mm	inch	mm
SRS-40	2.2	56	1.7	1.2	1.95	49	2.9	73
SRS-50	2.4	61	2.0	1.4	2.14	54	3.1	79
SRS-60	2.6	66	2.3	1.5	2.33	59	3.4	86
SRS-70	2.8	70	2.6	1.7	2.51	64	3.6	91
SRS-85	3.0	75	3.0	2.0	2.78	71	3.9	98
SRS-100	3.2	80	3.5	2.4	3.05	77	4.1	104
SRS-125	3.5	88	4.3	2.9	3.5	89	4.5	114
SRS-150	3.7	95	4.6	3.1	3.93	100	4.8	124
SRS-175	3.9	100	5.3	3.5	4.35	110	5.1	130
SRS-200	4.2	107	6.3	4.2	4.76	121	5.5	139
SRS-250	4.5	115	7.7	5.1	5.56	141	5.9	150
SRS-275	4.7	119	8.4	5.6	5.94	151	6.1	155
SRS-300	4.9	123	9.2	6.2	6.31	160	6.3	160
SRS-400	5.5	138	12.4	8.4	7.7	196	7.1	179
SRS-500	6.0	152	15.8	10.6	8.92	227	7.8	198

Chart continues below

Part No	Rated Capacity					
	Vertical		Choker		Basket	
	lbs	Te	lbs	Te	lbs	Te
SRS-40	40,000	18.2	32,000	14.5	80,000	36.4
SRS-50	50,000	22.8	40,000	18.2	100,000	45.6
SRS-60	60,000	27.4	48,000	21.9	120,000	54.8
SRS-70	70,000	31.8	56,000	25.4	140,000	63.6
SRS-85	85,000	38.6	68,000	30.8	170,000	77.2
SRS-100	100,000	45.4	80,000	36.3	200,000	90.8
SRS-125	125,000	56.8	100,000	45.4	250,000	113.6
SRS-150	150,000	68.2	120,000	54.5	300,000	136.4
SRS-175	175,000	79.4	140,000	63.5	350,000	158.8
SRS-200	200,000	90.8	160,000	72.6	400,000	181.6
SRS-250	250,000	113.4	200,000	90.7	500,000	226.8
SRS-275	275,000	124.8	220,000	99.8	550,000	249.6
SRS-300	300,000	136.2	240,000	108.9	600,000	272.4
SRS-400	400,000	181.6	320,000	145.2	800,000	363.2
SRS-500	500,000	226.8	400,000	181.4	1,000,000	453.6

EXTENDER™ ADJUSTABLE SLINGS



When load handling heavy equipment becomes a challenge—especially when lifting loads with differential sling lengths—adjustable high performance synthetic rope slings are ideal tools. Cortland International offers high performance synthetic fiber rope slings in an adjustable form: Extender™ Slings.

Extender Slings have one permanent eye, and one eye that is adjustable, which means it can be tightly sized to fit an application, then lengthened or shortened to fit a different application. A single Extender Sling can solve lifting requirements in a wide variety of situations. This changes a high performance rope sling from a specific-use tool, to one that is adaptable for multiple uses; minimizing the number of lifting slings needed in-stock.

Extender Slings are currently available with standard vertical lifting capacities from 10 to 250 tons. All single leg or multi-leg Extender slings are proof-loaded to 2x WLL (5:1), have less than 1% elongation under WLL, and are properly tagged.

Features and Benefits

- UHMWPE high performance lifting sling
- One permanent eye, one adjustable eye
- Length adjustable, to use in a variety of applications
- Opposing force tightens the adjustable splice, preventing any lengthening of the sling
- Lightweight flexibility for safe and fast rigging
- Minimum length dependent on rope diameter size; no max length limitations
- Easy to inspect
- Durable cut-resistant eye terminations
- Many wear protection options, offering increased protection yet allowing for inspection



Extender™ Slings are adjustable to allow use in a variety of applications; they feature one permanent eye and one adjustable eye

Extender™ Adjustable Slings

Nominal diameter		Size (circ. in.)	Sling Rated Capacities @ 5:1 WLL (lbs)				Minimum eye size		Minimum OAL	
inches	mm		Vertical		Basket		inches	mm	feet	m
			lbs	tonnes	lbs	tonnes				
Plasma® 12 Strand										
1/4	6	3/4	1,280	0.6	2,560	1.2	6	152.4	4	1.2
5/16	8	15/16	1,872	0.8	3,744	1.7	6	152.4	4	1.2
3/8	9	1-1/8	2,800	1.3	5,600	2.5	6	152.4	5	1.5
7/16	11	1-1/4	3,360	1.5	6,720	3.0	6	152.4	6	1.8
1/2	12	1-1/2	5,008	2.3	10,016	4.5	6	152.4	6	1.8
9/16	14	1-3/4	6,064	2.8	12,128	5.5	6	152.4	7	2.1
5/8	16	2	8,224	3.7	16,448	7.5	6	152.4	7	2.1
3/4	18	2-1/4	10,960	5.0	21,920	9.9	6	152.4	8	2.4
13/16	20	2-1/2	11,840	5.4	23,680	10.7	6	152.4	9	2.7
7/8	22	2-3/4	14,816	6.7	29,632	13.4	6	152.4	10	3.0
1	24	3	17,600	8.0	35,200	16.0	8	203.2	11	3.4
1-1/16	26	3-1/4	20,672	9.4	41,334	18.7	8	203.2	12	3.7
1-1/8	28	3-1/2	23,520	10.7	47,040	21.3	8	203.2	12	3.7
1-1/4	30	3-3/4	26,400	12.0	52,800	23.9	8	203.2	13	4.0
1-5/16	32	4	31,360	14.2	62,720	28.4	8	203.2	14	4.3
1-1/2	36	4-1/2	35,360	16.0	70,720	32.1	8	203.2	16	4.9
Plasma 12x12										
1-5/8	40	5	46,560	21.1	93,120	42.2	12	304.8	18	5.5
1-3/4	44	5-1/2	50,240	22.8	100,480	45.6	12	304.8	20	6.1
2	48	6	56,800	25.8	113,600	51.5	12	304.8	21	6.4
2-1/8	52	6-1/2	68,480	31.1	136,960	62.1	12	304.8	23	7.0
2-1/4	56	7	76,960	34.9	153,920	69.8	12	304.8	26	7.9
2-1/2	60	7-1/2	84,800	38.5	169,600	76.9	12	304.8	27	8.2
2-5/8	64	8	95,360	43.3	190,720	86.5	12	304.8	27	8.2
2-3/4	68	8-1/2	105,600	47.9	211,200	95.8	12	304.8	28	8.5
3	72	9	124,800	56.6	249,600	113.2	12	304.8	30	9.1
3-1/8	76	9-1/2	136,000	61.7	272,000	123.4	18	457.2	32	9.8
3-1/4	80	10	150,400	68.2	300,800	136.4	18	457.2	34	10.4
3-1/2	84	10-1/2	177,280	80.4	354,560	160.8	18	457.2	36	11.0
3-5/8	88	11	200,000	90.7	400,000	181.4	18	457.2	37	11.3
3-3/4	92	11-1/2	210,720	95.6	421,440	191.2	18	457.2	38	11.6
4	96	12	243,200	110.3	486,400	220.6	18	457.2	40	12.2

Extender™ slings must only be basketed in the slings' clear spans and never loaded on a spliced area. Extender slings must never be used in a choker configuration.

This MBL includes a 20% reduction from traditional, non-adjustable Plasma Eye and Eye Slings due to efficiency losses in the adjustable splice. Minimum Break Load (MBL) in pounds is determined using spliced test samples in accordance with Cordage Institute 1500-02—Test Method for Fiber Ropes. Specifications for Extender slings assume one fixed eye splice and one adjustable "pass through" splice. The length of the two splices determines the minimum length of the Extender Sling.

This design factor takes into account various factors including the use of Ultra High Molecular Weight Polyethylene (UHMWPE) fiber which is extremely durable and resistant to repeated high loads. The recommended Design Factor (DF) of 5:1 on this chart is based on several existing sling standards including ASME B30.9. Extender rope slings have and can be used with different DF ratios; however, this is a decision which must be made by a qualified person in conjunction with the rope manufacturer.

VEHICLE RECOVERY AND TOW CABLES



When heavy equipment becomes immobilized, productivity is immediately impacted. Recovering disabled vehicles is often a difficult and hazardous operation. Traditional steel wire rope or chain tow lines are heavy, inflexible, and difficult to handle and rig. In the event of failure, these steel systems can recoil unpredictably, posing serious risks to personnel and equipment.

Cortland International's synthetic braided rope recovery and tow lines are engineered to replace steel cables. Quickly and easily attached to recovery or towing equipment on wheeled or tracked vehicles, these solutions are proven to perform under the toughest conditions and have been trusted for more than 25 years.

Cortland recovery and tow cables are typically supplied in an endless-loop (grommet) configuration with eye terminations at each end. The synthetic rope construction is unaffected by water, highly resistant to cutting, and offers excellent UV stability, while maintaining strength in both extreme heat and cold.

To protect the fiber core, the entire cable body is encased in a heavy-duty, high-visibility protective jacket. This extra-durable jacketing shields the rope from external abrasion, cutting, and the ingress of dirt and debris during operation. Each end termination is protected with lightweight, high-durability wear protection, and every cable is supplied with an identification tag displaying the Minimum Break Load (MBL) and a unique serial number to ensure full traceability.

Proper cable selection should be based on the pulling capability of the recovery vehicle — not the weight of the disabled machine. Cortland International recommends a minimum Safe Working Load (SWL) safety factor of 2.3:1 or greater for vehicle recovery and towing applications.



The key determining factor in choice of correctly sized/strength Cortland International tow cable is the “pulling power” of the recovery/towing vehicle, NOT THE DEAD WEIGHT OF THE DISABLED VEHICLE. Pulling power of the recovery/tow vehicle plus a SWF (Safe Work Load) factor of 2.3:1 or higher should be used.

Common sizes of Cortland International Vehicle Recovery / Tow Cables are shown below. However, custom sizes and lengths can be manufactured, if required.

Tow Cables fabricated with Plasma® rope, Grommet style (endless loop with formed eyes)

Part No.	Nominal Size		Minimum Break Load (MBL)		Eye Sizes Each End	Standard Length		Approx. Wt. per Cable		Target Vehicles
	Dia. inch	Dia. mm	lbs	Te (tonnes)		ft	m	lbs	kg	
T310G-25SST	5/8"	16	84,000	38	18"	25	7.6	5	2.3	Light Vehicles
T312G-25SST	3/4"	18	113,025	51	18"	25	7.6	7	3.2	Light Vehicles
T314G-25SST	7/8"	22	152,790	69	18"	25	7.6	10	4.5	Light Vehicles
T316G-25SST	1"	24	181,500	82	18"	25	7.6	16	7.3	Light Vehicles
T324G-30SST	1-1/2"	36	364,650	165	24"	30	9.1	36	16.3	Medium Vehicles & D6-8 dozers
T3332G-30SST	2"	48	585,750	266	36"	30	9.1	85	38.6	770-780 series CAT trucks & D-9 dozers
T3340G-30SST	2-1/2"	60	874,800	397	36"	30	9.1	103	46.7	790 series CAT Trucks & D-10/11 dozers

Tow Cables fabricated with Toro® rope, Grommet style (endless loop with formed eyes)

Part No.	Nominal Size		Minimum Break Load (MBL)		Eye Sizes Each End	Standard Length		Approx. Wt. per Cable		Target Vehicles
	Dia. inch	Dia. mm	lbs	Te (tonnes)		ft	m	lbs	kg	
Z310G-25SST	5/8"	16	78,870	36	18"	25	7.6	5	2.3	Light Vehicles
Z312G-25SST	3/4"	18	101,970	46	18"	25	7.6	9	4.1	Light Vehicles
Z314G-25SST	7/8"	22	139,095	63	18"	25	7.6	12	5.4	Light Vehicles
Z316G-25SST	1"	24	173,250	79	18"	25	7.6	16	7.3	Light Vehicles
Z324G-30SST	1-1/2"	36	354,750	161	24"	30	9.1	38	17.2	Medium Vehicle & D6-D8 Dozers
Z3332G-30SST	2"	48	610,335	277	36"	30	9.1	68	30.8	Cat 770-780 series trucks & D9 dozers
Z3340G-30SST	2-1/2"	60	939,510	426	36"	30	9.1	105	47.6	Cat 790 series trucks & D11 dozers



SYNTHETIC ROPE BODY CABLES

Cortland International® Synthetic Rope Body Cables are engineered to safely secure off-highway truck beds in a horizontal position during maintenance operations. Designed with durability and personnel safety in mind, these body cables leverage the exceptional strength-to-weight advantages of Cortland's high-performance 12-strand braided synthetic rope and feature formed eye terminations at each end.

Each cable is designed to provide the correct D:d connection into existing truck pad-eyes, ensuring proper fit and reliable load transfer. Suitable for both in-shop and in-field maintenance, Synthetic Rope Body Cables are significantly easier to handle than traditional wire cables. At approximately one-third the weight of steel, they can typically be installed by a single person, improving safety and reducing labor requirements.

Additional advantages include:

- No wire-related hazards such as corrosion, broken strands, or fish-hooks
- No alignment issues caused by twists or kinks during installation
- No water absorption, with a protective outer jacket for added durability

These Synthetic Rope Body Cables deliver elongation characteristics comparable to the steel wire cables they replace, while offering a longer service life. All assemblies are proof-tested to 2x the Working Load Limit (WLL) prior to shipment and are load-rated and fully tagged.

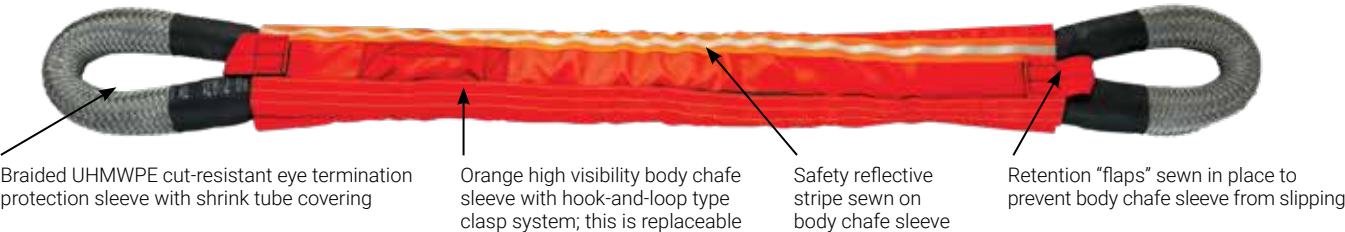
Features

- An engineered synthetic fiber cable specifically designed for keeping a mining truck bed open during maintenance
- Fits 797F, 785D, 789D & 793 Cat® trucks
- Light weight
- Easy handling
- Strength-member core of 12-Strand braided synthetic rope; proof-loaded to retain length tolerances
- Formed eye terminations each end protected with double-layer of braided UHMWPE fiber (SX) chafe gear
- Replaceable weld-splatter resistant nylon fabric body chafe gear with reflective stripe
- Weatherproof identification tag

Email us at contact@cortlandinternational.com or visit our website at cortlandinternational.com for more information.

Part No.*	Description	Fits CAT Truck Models	Length	Strength	Min. Bend Dia.	Weight
T321SPG0069	Cat® Synthetic Rope Body Cable	797F	1735mm / 68.3in	130Te / 286,500lbs	74mm / 2.93in	15 lbs
T320SPG0071	Cat® Synthetic Rope Body Cable	785D, 789D, 793	1511mm / 59.5in	87Te / 192,000lbs	46mm / 1.84in	10 lbs

* Body cables for other CAT vehicles are available upon request and can be made to suit alternative connections as required



WEAR PROTECTION



SX Chafe Guard



Cortland Cage



Asguard



DXC Chafe



XT Chafe



PNW available in tubular form, or hook-and-clasp

Durability is also an important factor of overall rope or sling costs. With the addition of wear protective gear such as pendant and protective covers, the useful life can be significantly increased, creating maximum cost efficiency with minimal maintenance. For further details on our wear protection solutions, refer to our Wear Protection brochure.

SX Chafe Guard a braided tubular structure offering 100% protection to the rope.

Cortland Cage combines the lightweight, abrasion resistant, and non-water-absorbing properties of HMPE fiber in a braided cover sleeve.

Asgard Chafe Protection is made from HMPE and PNW fibers in a woven, laminated and PU-coated construction and built in a layered design.

DXC Chafe is a tightly braided tubular polyester chafe sleeve with proprietary marine polyurethane coating for use in extreme applications.

XT Chafe is a tightly braided tubular polyester chafe sleeve with proprietary heavy marine polyurethane coating for use in extreme chafe applications. Less flexible than other chafe options.

PNW is a woven fiber material and the most commonly used protection for abrasion; available in both tubular, and hook-and-clasp options.

ENGINEERED GUY CABLES

When wind, rain, snow, and extreme environmental conditions threaten the stability of tall structures, engineered guy cables provide the strength and reliability needed to keep them secure. From broadcast towers and radio antennas to mobile communication systems and other critical infrastructure, guy cables must maintain constant tension while delivering dependable, long-term performance.

Cortland International's engineered synthetic guy cables provide a lightweight, high-strength alternative to traditional steel guy wires. Manufactured using advanced high-performance fibers, these assemblies deliver exceptional strength while dramatically reducing weight, simplifying installation, and improving handling in the field.

Unlike steel, synthetic fibers offer outstanding dielectric properties, acting as natural electrical insulators while eliminating many of the challenges associated with conventional EHS steel cable, including electromagnetic interference (EMI), radio frequency interference (RFI), signal suppression, directional irregularities, and white-noise arcing. Combined with low stretch, minimal creep, excellent UV resistance, and exceptional weather durability, Cortland synthetic guy cables deliver reliable, long-term performance in demanding environments.

Designed to integrate seamlessly into existing infrastructure, Cortland synthetic guy cables utilize the same geometry as conventional steel cable fittings, enabling straightforward replacement or incorporation into new installations. Their lightweight, flexible construction also makes them ideal for both permanent installations and rapidly deployable mobile systems.

Every solution begins with your application. Our engineering team works closely with customers to evaluate load requirements, cable length, service life, interface geometry, environmental conditions, and protective jacket or coating requirements to deliver an optimized solution tailored to each application.

Features

- Engineered specifically for guying applications
- High strength-to-weight ratio
- Fully synthetic system, including terminations
- Low stretch and low creep
- Excellent dielectric properties
- Corrosion resistant
- UV and weather resistant
- Lightweight and easy to install
- Compatible with existing steel cable geometries

Applications

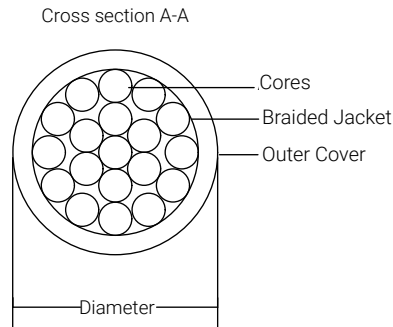
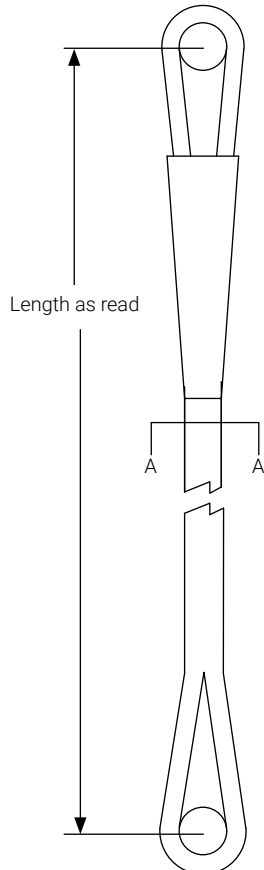
- Broadcast towers
- Communication and radio towers
- Mobile communication towers
- Antenna systems
- Fixed structures
- Static and dynamic structural guying applications



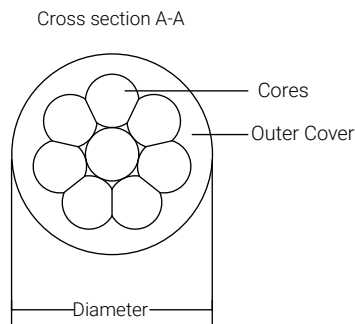
ENGINEERED GUY CABLES

Engineered Guy Cables

Part No.	Equivalent EHS Size (in)	Outside Dia. (in)	Minimum Break Strength (lbs)	Linear Density (lbs/ft)	Recommended Pin Size (in)	Recommended Shackle Size (in)	Recommended Thimble Size (in)
3031	-	0.19	2,800	0.016	1/2	1/4	5/16" Galvanized Steel
3001	3/16	0.28	5,800	0.02	1/2	3/4	5/16" Galvanized Steel
3022	1/4	0.37	10,350	0.045	1	3/4	3/8" Galvanized Steel
3027	9/32	0.41	15,300	0.071	1	3/4	1/2" Galvanized Steel
3048	5/16	0.5	20,250	0.087	1-1/4	1	1/2" Galvanized Steel
3045	3/8	0.55	25,830	0.114	1-1/4	1	5/8" Galvanized Steel
3049	7/16	0.62	32,000	0.142	1-1/2	1-1/4	5/8" Galvanized Steel
3047	1/2	0.76	41,300	0.224	2	1-3/4	3/4" HD Galvanized Steel
3112	9/16	1	65,700	0.322	1-1/2	1-1/4	HDPE Bearing Pad
3114	5/8	1.11	100,300	0.403	1-3/4	1-1/2	HDPE Bearing Pad
3116	3/4	1.23	109,800	0.476	2	1-3/4	HDPE Bearing Pad
3115	7/8	1.28	118,000	0.548	2	1-3/4	HDPE Bearing Pad
3118	1	1.44	160,000	0.755	2-1/4	2	HDPE Bearing Pad
3121	1-1/2	1.56	186,300	0.833	2-1/4	2	HDPE Bearing Pad



Cross section for diameters 3/16"-9/16"



Cross section for diameters 5/8"-1-1/2"

Email contact@cortlandinternational.com for an initial discussion, or visit us online at cortlandinternational.com.



TERMINATIONS & INTEGRATED HARDWARE

MECHANICAL END FITTINGS FOR SYNTHETIC ROPES

Cortland is among a select group of companies worldwide capable of delivering high-performance fiber rope assemblies with trusted mechanical end fittings and integrated hardware.

Cortland delivers precision mechanical terminations for synthetic fiber ropes, replacing splices and knots with engineered end fittings that integrate seamlessly into demanding applications.

Available on ropes and cables from 4–22mm diameter. Our engineering team collaborates with clients to design solutions that meet exact interface, length, and performance requirements.

Ideal When Your Application Requires

- Stringent or stable length tolerances that spliced assemblies cannot achieve
- Precise mechanical interfaces where the rope connects directly to equipment
- Compact terminations where splice bulk would interfere with sheaves or components

Key Benefits

Cost Effective

No splicing tail needed. Eliminates thimbles, shackles, and other connecting hardware.

Precise & Repeatable

Engineered tolerances for accurate, consistent lengths across production runs.

Seamless Equipment Fit

Direct interface with equipment, ideal for steel wire replacement in critical applications.

Added Functionality

Pivot/swivel, turnbuckles, and sensor integration—built into the fitting.

Solutions include

- Eyes & forks
- Ball ends
- Cylinder & threaded stops
- Threaded studs
- Toggle ends
- Swivel eyes
- Clevis and pin
- Integrated turnbuckles
- Rotating / pivoting connections
- Quick connect / release fittings
- Mid-span connections
- Cable bend reliefs
- Chain & strap connections
- Standard wire connections

Please email contact@cortlandinternational.com for an initial discussion or visit us online at cortlandinternational.com.



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Masat-Silvassa Unit – India

Houston, TX – USA

Indore-M.P Unit – India

Mumbai – India

contact@cortlandinternational.com



Marine & Shipping



Fishing & Aquaculture



Offshore



Sports Nets



Heavy Lifting

BUILDING POWERFUL COLLABORATIONS

Over 1,000 customers worldwide trust us to
help grow their business.



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