SOUTHERN WIRE®

1-800-238-0333

2013 SYNTHETICS CATALOG

PROVIDING SOLUTIONS FOR SUCCESS

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Terms and Conditions of sale are available on our website at *www.southernwire.com*.

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ABOUT SOUTHERN WIRE

Founded in 1972, Southern Wire is a leading wholesale distributor of wire rope and rigging products. Our broad product offering from wire rope, cable, chain, rigging hardware to synthetic slings enables us to be a single-source solution to all of our customers.

We offer a large inventory of import and domestic wire rope including specialty, general purpose and galvanized options. In addition to our traditional green and white wire rope, we provide a full line of wire rope fabrication through 3.5 inch diameter including proof testing. Southern Wire also offers an extensive line of synthetic slings including web and poly-round slings, private labeled with a custom name and contact information.

With sales and distribution centers strategically located throughout the United States, Southern Wire is able to provide unparalleled logistics and service to its customers.

Southern Wire has earned a reputation for understanding the unique buying requirements of our customers and exceeding our customers' expectations. We are committed to increasing our customers' competitive advantage through superior customer service, aggressive pricing, quality inventory and a dedicated, knowledgeable staff. Partner with a company that provides more than just wire rope, we provide solutions for success!

MISSION STATEMENT

With quality and safety as our guide, it is the mission of Southern Wire to deliver superior foreign and domestic wire rope, chain, and other related rigging products and fabricated assemblies with exceptional service. By purchasing in large volumes from qualified vendors, stocking at strategically located nationwide distribution centers, and utilizing proprietary state of the art technologies, we are able to provide same day shipping of stock items at outstanding value. The Southern Wire family strives to build strong relationships with our customers, employees, vendors, and community by exceeding expectations and providing long term competitive advantages.

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Southern Wire Product Overview

Recommended Practices

For a complete review of recommended industry practices, please refer to:

- ASME B30.9 Sling Safety Standard
- OSHA Industrial Slings Regulations (Office of the Federal Register)
- Web Sling Tie Down Association Technical Manual

WHAT TO DO

- Make sure load weight is within the sling's rated capacity; slings should be long enough so the rated load is adequate when the sling to load angle is considered
- Select sling characteristics that are suitable for the load, hitch and environment
- Slings with fittings used in a choker hitch should be of sufficient length to ensure choking action is on the webbing, not the fitting
- Balance loads on basket hitch slings to prevent slippage
- Make sure fitting opening shape and size ensure proper seating in the hook and the other attachments
- Protect slings from being cut by sharp edges or abrasive surfaces
- Keep tags and labels away from the load, hook and point of choke
- Place blocks under a load to allow removal of sling
- Hitch slings so that the load is controlled
- Make sure personnel stand clear of suspended loads and remain alert for snagging
- Avoid shock loading
- Avoid twisting and kinking of legs (branches)
- Sling legs (branches) should support the load from the sides above the center of gravity when in a basket hitch
- Center load applied to the hook

WHAT NOT TO DO

- Load slings in excess of rated capacity (consider load angle)
- Twist, shorten, lengthen or tie knots in slings
- Drag slings on the floor or abrasive surfaces
- Pull slings out from under a load
- Drop slings equipped with metal fittings
- Constrict or bunch slings and labels between the ears of a clevis, shackle, or in a hook
- Use slings that appear to be damaged
- Allow personnel to ride the sling or load being lifted
- Use slings with illegible tags

Recommended Practices

REMOVAL FROM SERVICE

A flat web sling shall be removed from service if any of the following is visible:

- If sling rated capacity or sling material identification is missing or not readable
- Acid or alkali burns
- Melting, charring, or weld spatter of any part of the web sling
- Holes, tears, cuts, snags, or embedded particles
- Broken or worn stitching in load bearing splices
- Excessive abrasive wear
- Knots in any part of the web sling
- Distortion and excessive pitting, corrosion or broken fittings
- Any conditions which cause doubt as to the strength of the sling
- If red core warning yarns are visible

EXPOSURE TO COMMON CHEMICALS

Chemical	Polyester	Nylon
Acid	*	**NO**
Alcohol	OK	OK
Aldehydes	**NO**	OK
Strong Alkalis	**	OK
Bleaching Agent	OK	**NO**
Dry Cleaning Solvent	OK	OK
Ethers	**NO**	OK
Halogenated Hydrocarbon	OK	OK
Hydrocarbon	OK	OK
Ketones	OK	OK
Oil, Crude	OK	OK
Oil, Lubricating	OK	OK
Soaps, Detergent	OK	OK
Water, Seawater	OK	OK
Weak Alkalis	OK	OK

* Disintegrated by concentrated sulfuric acid.
** Degraded by strong alkalis at elevated temperatures

Acid Damage

Heat Damage

Cuts

Abrasion Damage

Face Cuts

Punctures & Snags

Tensile Break

Illegible or Missing Tag

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Rated Capacity Information

ANGLE / FACTOR COMPARISON

Angle Degrees	Factor
90	1.0000
85	0.9962
80	0.9848
75	0.9659
70	0.9397
65	0.9063
60	0.8660
55	0.8192
50	0.7660
45	0.7071
40	0.6528
35	0.5736
30	0.5000
25	0.4226
20	0.3420
15	0.2588

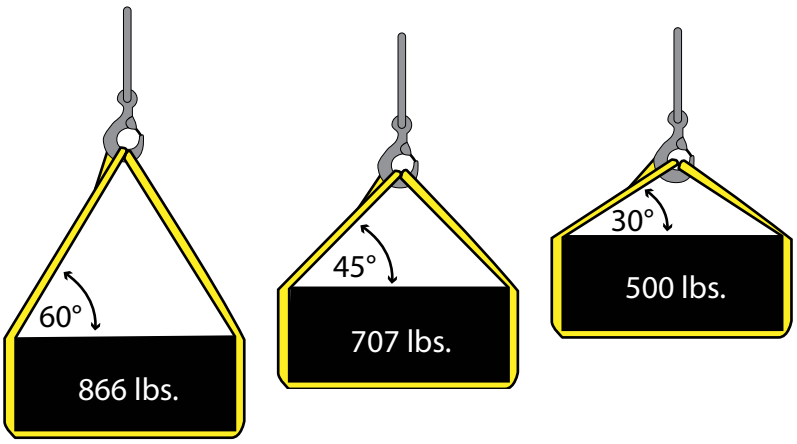
RATED CAPACITY

The rated capacities of the slings in this catalog are given in pounds. Refer to the maximum recommended weight for which the sling is to be used in one of the standard types of lifts as illustrated.

EFFECT OF ANGLE

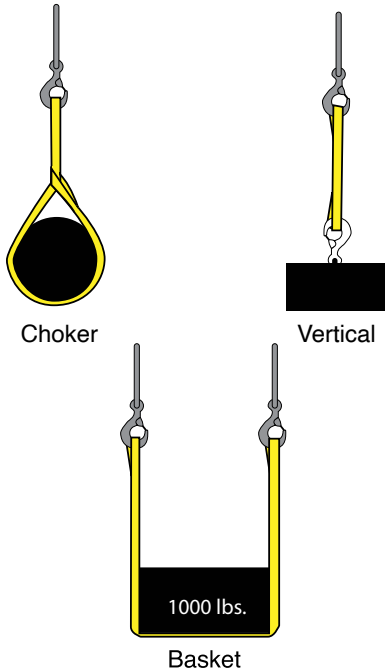
When slings are used at an angle (i.e. two slings or one sling in a basket attached to only one crane hook), sling capacity is reduced. How much it is reduced depends on the degree of angle. You can determine whether a sling will be rated high enough if you know the angle between the sling leg and the horizontal. Once you know this angle, multiply the sling's rating by the appropriate factor in the table This will give you the sling's reduced rating.

SLING CAPACITY DECREASES AS THE ANGLE INCREASES



A sling capable of lifting 1,000 lbs. in a 90° vertical basket hitch, can only lift 866 lbs. at a 60° angle, 707 lbs. at a 45° angle, and 500 lbs. at a 30° angle.

TYPES OF HITCHES



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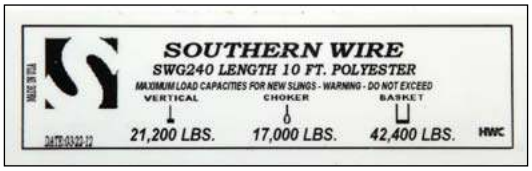
Customize Your Sling

FLAT WEB MATERIAL OPTIONS	
9800# Heavy Duty Nylon Webbing:	Suitable for most applications.
9800# Polyester Webbing:	Suitable for most applications. Polyester stretches less for better load control.
7000# Light Duty Nylon Webbing:	An economical alternative for lighter applications.
9800# Reinforced Edge Webbing:	These nylon web slings have polymer coated yarns woven into the edges to reduce damage and increase life.

CUSTOM PRINTED TAGS

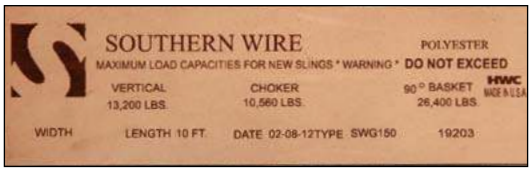
Southern Wire can custom print tags in Polyethylene and leather. Both types have unique qualities, depending upon customer preference. **(Private label programs available)**

Polyethylene



These durable tags are printed on demand by Southern Wire. Polyethylene tags offer customers greater flexibility and can be serialized, customized with company logos, and bar coded; there is no minimum quantity or premium charge for polyethylene tags.

Leather



Leather is the most durable of the two tags. Leather tags can be branded with serial numbers and other identifying information specific to your company. It carries a premium charge and can be purchased in any quantity.

WEAR PROTECTION

Wear protection prolongs the life of the sling, ultimately resulting in cost effectiveness. Southern Wire utilizes four wear materials. Pukka (a 5/16" felt pad, as shown), leather, Cordura, and nylon, which can be used in any of the following configurations:

- Eye or Body Wrapped Slings
- Edge guard treatment, protects from edge abrasion
- Lined eye, protects the sling at lifting point
- Velcro sliding pad, easily removable
- Sewn-on sleeve, attached to sling
- Sliding sleeve, adjustable

Nylon and Polyester Web Slings

TYPE 1

TYPE 2

HARDWARE SLINGS

	HEAVY DUTY					
	Type 1 (TC)	Type 2* (TT)	Web Width (in.)	Rated Capacities in Pounds		
				Vertical	Choker	Basket
1 PLY	TC1-902	TT1-902	2	3,200	2,500	6,400
	TC1-903	TT1-903	3	4,800	3,800	9,600
	TC1-904	TT1-904	4	6,400	5,000	12,800
	TC1-906	TT1-906	6	9,600	7,700	19,200
	TC1-908	TT1-908	8	12,800	10,200	25,600
	TC1-910	TT1-910	10	16,000	12,800	32,000
	TC1-912	TT1-912	12	19,200	15,400	38,400
2 PLY	TC2-902	TT2-902	2	6,400	5,000	12,800
	TC2-903	TT2-903	3	8,600	6,900	17,200
	TC2-904	TT2-904	4	11,500	9,200	23,000
	TC2-906	TT2-906	6	16,300	13,000	32,600
	TC2-908	TT2-908	8	19,200	15,000	38,400
	TC2-910	TT2-910	10	22,400	17,400	44,800
	TC2-912	TT2-912	12	26,900	21,500	53,800

** Type 2 can not be used in a choker hitch.*
- *Three and Four ply hardware slings are available upon request.*
- *Hardware – Aluminum hardware is available on single ply types 1 and 2 slings in 2", 3", 4" and 6" widths.*

	LIGHT DUTY					
	Type 1 (TC)	Type 2* (TT)	Web Width (in.)	Rated Capacities in Pounds		
				Vertical	Choker	Basket
1 PLY	TC1-702	TT1-702	2	2,400	1,900	4,800
	TC1-703	TT1-703	3	3,600	2,900	7,200
	TC1-704	TT1-704	4	4,800	3,800	9,600
	TC1-706	TT1-706	6	7,200	5,800	14,400
2 PLY	TC2-702	TT2-702	2	4,800	3,800	9,600
	TC2-703	TT2-703	3	6,500	5,200	13,000
	TC2-704	TT2-704	4	8,600	6,900	17,200
	TC2-706	TT2-706	6	12,600	10,100	25,200

** Type 2 can not be used in a choker hitch.*
- *Hardware – Aluminum hardware is available on single ply types 1 and 2 slings in 2", 3", 4" and 6" widths.*

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WARNING
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Nylon and Polyester Web Slings

EYE & EYE SLINGS

HEAVY DUTY						
Type 3 Flat Eye	Type 4 Twist Eye	Web Width (in.)	Rated Capacities in Pounds			Eye Length (in.)	
			Vertical	Choker	Basket		
EE1-901		1	1,600	1,250	3,200	9	1 PLY
EE1-902		2	3,200	2,500	6,400	9	
EE1-903		3	4,800	3,800	9,600	12	
EE1-904		4	6,400	5,000	12,800	12	
EE1-906		6	9,600	7,700	19,200	18	
EE1-908		8	12,800	10,200	25,600	24	
EE1-910		10	16,000	12,800	32,000	30	
EE1-912		12	19,200	15,400	38,400	30	
EE2-901		1	3,200	2,500	6,400	9	2 PLY
EE2-902		2	6,400	5,000	12,800	9	
EE2-903		3	8,600	6,900	17,200	12	
EE2-904		4	11,500	9,200	23,000	12	
EE2-906		6	16,300	13,000	32,600	18	
EE2-908		8	19,200	15,400	38,400	24	
EE2-910		10	22,400	17,900	44,800	30	
EE2-912		12	26,900	21,500	53,800	30	
EE3-901		1	4,100	3,300	8,200	12	3 PLY
EE3-902		2	8,300	6,600	16,600	12	
EE3-903		3	12,500	10,000	25,000	18	
EE3-904		4	16,000	12,800	32,000	18	
EE3-906		6	23,000	18,400	46,000	24	
EE3-908		8	30,700	24,500	61,400	30	
EE3-910		10	36,800	29,400	73,600	36	
EE3-912		12	44,000	35,200	88,000	36	
EE4-901		1	5,000	4,000	10,000	12	4 PLY
EE4-902		2	10,000	8,000	20,000	12	
EE4-903		3	14,900	11,900	29,800	18	
EE4-904		4	19,800	15,800	39,600	18	
EE4-906		6	29,800	23,800	59,600	24	
EE4-908		8	39,700	31,700	79,400	30	
EE4-910		10	49,600	39,600	99,200	36	
EE4-912		12	59,500	47,600	119,000	36	

• *Tapering: The eyes of sling Types 3 and 4 are tapered beginning with 3" width and wider unless otherwise specified. These wider slings are tapered at the bearing points to accommodate a crane hook.*

***Cordura lined eyes must be specified at time of order.**

TYPE 3 | TYPE 4

• *Heavy duty slings also available with reinforced edge webbing.*

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Nylon and Polyester Web Slings

TYPE 3

TYPE 4

• *Heavy duty slings also available with reinforced edge webbing.*

EYE & EYE SLINGS

	LIGHT DUTY					
	Type 3 Flat Eye / Type 4 Twist Eye	Web Width (in.)	Rated Capacities in Pounds			Eye Length (in.)
			Vertical	Choker	Basket	
1 PLY	EE1-701	1	1,200	950	2,400	9
	EE1-702	2	2,400	1,900	4,800	9
	EE1-703	3	3,600	2,900	7,200	12
	EE1-704	4	4,800	3,800	9,600	12
	EE1-706	6	7,200	5,800	14,400	18
2 PLY	EE2-701	1	2,400	1,900	4,800	9
	EE2-702	2	4,800	3,800	9,600	9
	EE2-703	3	6,500	5,200	13,000	12
	EE2-704	4	8,600	6,900	17,200	12
	EE2-706	6	12,200	9,800	24,400	18
3 PLY	EE3-701	1	3,500	2,800	7,000	12
	EE3-702	2	7,000	5,600	14,000	12
	EE3-703	3	9,400	7,500	18,800	18
	EE3-704	4	12,000	9,600	24,000	18
	EE3-706	6	18,000	14,400	36,000	24
4 PLY	EE4-701	1	4,200	3,400	8,400	12
	EE4-702	2	8,000	6,400	16,000	12
	EE4-703	3	12,000	9,600	24,000	18
	EE4-704	4	16,000	12,800	32,000	18
	EE4-706	6	23,500	18,800	47,000	24

• *Tapering: The eyes of sling Types 3 and 4 are tapered beginning with 3" width and wider unless otherwise specified. These wider slings are tapered at the bearing points to accommodate a crane hook.*

***Cordura lined eyes must be specified at time of order.**

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Nylon and Polyester Web Slings

ENDLESS OR GROMMET

TYPE 5

HEAVY DUTY					
Type 5 (EN)	Web Width (in.)	Rated Capacities in Pounds			
		Vertical	Choker	Basket	
EN1-901	1	3,200	2,500	6,400	1 PLY
EN1-902	2	6,400	5,000	12,800	
EN1-903	3	8,600	6,900	17,200	
EN1-904	4	11,500	9,200	23,000	
EN1-906	6	16,300	13,000	32,600	
EN1-908	8	19,200	15,400	38,400	
EN1-910	10	22,400	17,900	44,800	
EN1-912	12	26,900	21,500	53,800	
EN2-901	1	6,200	4,900	12,400	2 PLY
EN2-902	2	12,200	9,800	24,400	
EN2-903	3	16,300	13,000	32,600	
EN2-904	4	20,700	16,500	41,400	
EN2-906	6	28,600	23,000	57,200	
EN2-908	8	30,700	24,500	61,400	
EN2-910	10	33,600	26,800	67,200	
EN2-912	12	37,600	30,000	75,200	
EN3-901	1	8,000	6,400	16,000	3 PLY
EN3-902	2	16,000	12,800	32,000	
EN3-903	3	21,500	17,200	43,000	
EN3-904	4	28,700	23,000	57,400	
EN3-906	6	40,700	32,500	81,400	
EN3-908	8	46,000	36,800	92,000	
EN3-910	10	51,500	41,200	103,000	
EN3-912	12	59,200	47,300	118,400	
EN4-901	1	10,000	8,000	20,000	4 PLY
EN4-902	2	19,800	15,800	39,600	
EN4-903	3	26,700	21,300	53,400	
EN4-904	4	35,600	28,400	71,200	
EN4-906	6	50,500	40,400	101,000	
EN4-908	8	57,600	46,000	115,200	
EN4-910	10	67,200	53,700	134,400	
EN4-912	12	80,700	64,500	161,400	

• Type 5 endless slings are not tapered unless specified.
• Heavy duty slings also available with reinforced edge webbing.

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Nylon and Polyester Web Slings

TYPE 5

ENDLESS OR GROMMET

	LIGHT DUTY				
	Type 5 (EN)	Web Width (in.)	Rated Capacities in Pounds		
			Vertical	Choker	Basket
1 PLY	EN1-701	1	2,400	1,900	4,800
	EN1-702	2	4,800	3,800	9,600
	EN1-703	3	6,500	5,200	13,000
	EN1-704	4	8,600	6,900	17,200
	EN1-706	6	12,200	9,800	24,400
2 PLY	EN2-701	1	4,800	3,800	9,600
	EN2-702	2	9,600	7,700	19,200
	EN2-703	3	11,700	9,400	23,400
	EN2-704	4	15,500	12,400	31,000
	EN2-706	6	22,500	18,000	45,000
3 PLY	EN3-701	1	6,200	4,900	12,400
	EN3-702	2	12,500	10,000	25,000
	EN3-703	3	16,300	13,000	32,600
	EN3-704	4	20,600	16,400	41,200
	EN3-706	6	29,300	23,400	58,600
4 PLY	EN4-701	1	7,700	6,200	15,400
	EN4-702	2	15,500	12,400	31,000
	EN4-703	3	20,800	16,600	41,600
	EN4-704	4	26,600	21,200	53,200
	EN4-706	6	37,800	30,200	75,600

• Type 5 endless slings are not tapered unless specified.

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Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Nylon and Polyester Web Slings

TYPE 6

CORDURA LINED REVERSED EYE SLINGS

HEAVY DUTY						
Type 6 (RE)	Sling Width (in.)	Rated Capacities in Pounds			Eye Length (in.)	
		Vertical	Choker	Basket		
RE1-902	2	4,500	3,600	9,000	9	1 PLY
RE1-904	4	7,700	6,200	15,400	15	
RE1-906	6	11,000	8,800	22,000	15	
RE2-902	2	6,500	5,200	13,000	9	2 PLY
RE2-904	4	13,000	10,400	26,000	15	
RE2-906	6	20,000	16,000	40,000	15	
RE3-902	2	7,600	6,080	15,200	12	3 PLY
RE3-904	4	16,400	13,100	32,800	15	
RE3-906	6	25,500	20,400	51,000	18	
RE4-902	2	10,000	8,000	20,000	15	4 PLY
RE4-904	4	20,700	16,560	41,400	15	
RE4-906	6	34,000	27,200	68,000	18	

LIGHT DUTY						
Type 6 (RE)	Rated Capacities in Pounds			Sling Width (in.)	Eye Length (in.)	
	Vertical	Choker	Basket			
RE1-702	3,600	2,900	7,200	2	9	1 PLY
RE1-704	6,800	5,400	13,600	4	15	
RE1-706	8,000	6,400	16,000	6	15	
RE2-702	5,200	4,200	10,400	2	9	2 PLY
RE2-704	10,500	8,400	21,000	4	15	
RE2-706	14,400	11,500	28,000	6	15	
RE3-704	14,000	11,200	28,000	4	15	3 PLY
RE3-706	20,000	16,000	40,000	6	18	

WARNING
Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Wide Body and Load Balancer Web Slings

TYPE 8

	WIDE BODY BASKET					
	Type 8 (WB)	Body Width (in.)	Rated Capacity Vertical Basket (lbs.)	Eye Length (in.)	Eye Width (in.)	Min. Sling Length (in.)
1 PLY	WB1-906	6	15,400	9	1 1/2	40
	WB1-908	8	20,400	12	2	46
	WB1-912	12	30,800	18	3	60
	WB1-916	16	38,000	24	3	72
	WB1-920	20	45,000	30	3 1/2	90
	WB1-924	24	52,000	36	4	100
	WB1-930	30	45,000	48	4	120
	WB1-936	36	45,000	54	4	144
2 PLY	WB2-906	6	28,600	9	1 1/2	40
	WB2-908	8	38,000	12	2	46
	WB2-912	12	57,200	18	3	60
	WB2-916	16	75,000	24	3 1/2	72
	WB2-920	20	90,000	30	5	90
	WB2-924	24	110,000	36	6	100
	WB2-930	30	90,000	48	6	120
	WB2-936	36	90,000	54	6	144

- *Not recommended to be used in choker configuration.*
- *Rated capacities are vertical (90°) basket. Capacity decreases as angle decreases as angle decreases. Do not use at angle less than 30° from horizontal.*

TYPE 9

	LOAD BALANCER BASKET					
	Type 9 (LBA)	Body Width (in.)	Rated Capacity Vertical Basket (lbs.)	Eye Length (in.)	Eye Width (in.)	Min. Sling Length (in.)
1 PLY	LBA1-906	6	5,000	9	1	44
	LBA1-908	8	5,000	9	1	44
	LBA1-910	10	5,000	12	1	54
	LBA1-912	12	5,000	12	1	54
	LBA1-916	16	10,000	12	2	54
	LBA1-920	20	10,000	18	2	66
	LBA1-924	24	10,000	18	2	66
2 PLY	LBA2-906	6	10,000	10	1	44
	LBA2-908	8	10,000	10	1	44
	LBA2-910	10	10,000	12	1	54
	LBA2-912	12	10,000	12	1	54
	LBA2-916	16	18,000	12	2	54
	LBA2-920	20	18,000	18	2	66
	LBA2-924	24	18,000	18	2	66

- *Not recommended to be used in choker configuration.*
- *Rated capacities are vertical (90°) basket. Capacity decreases as angle decreases as angle decreases. Do not use at angle less than 30° from horizontal.*

WARNING
Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Multi-Leg Bridle

TYPE 10

MULTI-LEG BRIDLE								
Web Width (in.)	Number of Legs	Rec. Oblong Size (in.)	Rec. Alloy Eye Hook	Rated Capacities in Pounds				
				Vertical	@ 60°	@ 45°	@ 30°	
1	1	1/2	1 ton	1,600				1 PLY
1	2	1/2	1 ton		2,700	2,200	1,600	
1	3	3/4	1 ton		4,100	3,300	2,400	
1	4	1	1 ton		5,500	4,500	3,200	
2	1	1/2	1 1/2 ton	3,000				
2	2	3/4	1 1/2 ton		5,100	4,200	3,000	
2	3	1	1 1/2 ton		7,700	6,300	4,500	
2	4	1	1 1/2 ton		10,300	8,400	6,000	
1	1	1/2	1 1/2 ton	3,000				2 PLY
1	2	3/4	1 1/2 ton		5,100	4,200	3,000	
1	3	3/4	1 1/2 ton		7,700	6,300	4,500	
1	4	1	1 1/2 ton		10,300	8,400	6,000	
2	1	3/4	3 ton	6,000				
2	2	1	3 ton		10,300	8,400	6,000	
2	3	1	3 ton		15,500	12,700	9,000	
2	4	1 1/4	3 ton		20,700	16,900	12,000	

- *Other sizes and configurations available upon request*
- *Capacities listed above correspond with the recommended hardware above. If oblong or hook sizes are changed capacities may change.*
- *Do not use slings at angles less than 30 degrees*
- *Do not exceed rated capacities*

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WARNING
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Polyester Roundslings

REMOVAL FROM SERVICE

A polyester roundsling shall be removed from service if any of the following is visible:

- If sling identification tag is missing or not readable.
- Melting, charring, or weld spatter of any part of the web sling.
- Holes, tears, cuts, embedded particles, abrasive wear or snags that expose the core fibers of the polyester roundsling.
- Broken or worn stitching in the cover which exposes the core fibers.
- Fittings when damaged, stretched or distorted in any way.
- Polyester roundslings that are knotted.
- Acid or Alkali burns of the sling.
- Any conditions which cause doubt as to the strength of the polyester roundsling.

ENDLESS ROUNDSLINGS

LIFT CAPACITIES ACCORDING TO TYPE (COLOR) AND HITCH USED

Code	Color	Rated Capacities in Pounds			Min. Length (ft.)	Approx. Weight (lbs/ft.)
		Vertical	Choker	Basket		
SWG30	Purple	2,650	2,120	5,300	1.5	0.20
SWG60	Green	5,300	4,240	10,600	1.5	0.30
SWG90	Yellow	8,400	6,720	16,800	2	0.50
SWG120	Tan	10,600	8,500	21,200	2	0.60
SWG150	Red	13,200	10,560	26,400	3	0.80
SWG180	Orange	16,800	13,440	33,600	3	0.90
SWG240	Blue	21,200	17,000	42,400	3	1.30
SWG300	Orange	25,000	20,000	50,000	3	1.50
SWG360	Grey	31,700	25,300	63,400	3	1.70
SWG500	Orange	40,000	32,000	80,000	4	2.20
SWG600	Brown	52,900	42,300	105,800	6	2.80
SWG800	Olive	66,100	52,880	132,200	6	3.40
SWG1000	Black	90,000	72,000	180,000	6	4.30

• Endless and Eye & Eye style of roundslings are made to a tolerance of ± 1% of the specified length (± 1" minimum tolerance) and can stretch 3% at rated capacity.
• Matched sets must be specified at time of order.

EYE AND EYE ROUNDSLINGS

LIFT CAPACITIES ACCORDING TO TYPE (COLOR) AND HITCH USED

Code	Color	Rated Capacities in Pounds			Min. Length (ft.)*	Approx. Weight (lbs/ft.)	Standard Eye Length (in.)
		Vertical	Choker	Basket			
SWG30	Purple	2,650	2,120	5,300	3	0.25	9
SWG60	Green	5,300	4,240	10,600	3	0.36	9
SWG90	Yellow	8,400	6,720	16,800	4	0.55	12
SWG120	Tan	10,600	8,500	21,200	4	0.65	12
SWG150	Red	13,200	10,560	26,400	4	0.84	12
SWG180	Orange	16,800	13,440	33,600	6	0.96	18
SWG240	Blue	21,200	17,000	42,400	6	1.50	18
SWG300	Orange	25,000	20,000	50,000	6	1.70	18
SWG360	Grey	31,700	25,300	63,400	6	2.00	18
SWG500	Orange	40,000	32,000	80,000	8	2.40	24
SWG600	Brown	52,900	42,300	105,800	8	3.10	24
SWG800	Olive	66,100	52,880	132,200	10	3.70	30
SWG1000	Black	90,000	72,000	180,000	10	4.60	30

** Shorter length available using smaller eye lengths*
• Must specify eye and eye when ordering.
• Endless and Eye & Eye style of roundslings are made to a tolerance of ± 1% of the specified length (± 1" minimum tolerance) and can stretch 3% at rated capacity.
• Higher capacity roundslings available upon request.
• Matched sets must be specified at time of order.

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Polyester Roundslings

6 PART BRAIDED ROUNDSLINGS

LIFT CAPACITIES ACCORDING TO TYPE (COLOR) AND HITCH USED

Code	Color	Rated Capacities in Pounds			Min. Length (ft.)	Weight (lbs/ft.)	Standard Eye (in.)	Width at Load (in.)	Thickness at Load (in.)	Min. ** Hardware Diameter (in.)	Eye Diameter (in.)
		Vertical	Choker	Basket							
B6-SWG30	Purple	6,700	5,300	13,400	4 1/2	0.8	15	3 1/4	3/4	5/8	1 3/4
B6-SWG60	Green	13,500	10,800	27,000	5	1.2	15	3 3/4	1 1/8	1	2
B6-SWG90	Yellow	21,400	17,100	42,800	5 1/2	1.6	15	4 1/4	1 1/4	1 1/4	2
B6-SWG120	Tan	27,000	21,600	54,000	5 1/2	2.0	15	4 1/2	1 3/8	1 3/8	2 1/4
B6-SWG150	Red	33,600	26,800	67,200	6 1/2	2.7	20	5 1/4	1 3/4	1 1/2	2 1/2
B6-SWG180	Orange	42,800	34,200	85,600	7	3.2	20	5 1/2	2	1 3/4	2 3/4
B6-SWG240	Blue	54,000	43,200	108,000	9	4.5	20	6 5/8	2 1/4	1 3/4	3 1/2
B6-SWG300	Orange	63,600	50,800	127,200	9	5.3	24	7 7/8	2 1/2	2	4
B6-SWG360	Grey	79,000	63,200	158,000	9 1/2	6.5	30	8 1/4	2 1/2	2 1/2	4 1/2
B6-SWG500	Orange	101,800	81,400	203,600	10	7.4	30	10 1/2	2 3/4	2 3/4	5
B6-SWG600	Brown	135,100	108,000	270,200	10 1/2	9.7	30	11	2 3/4	3	5
B6-SWG800	Olive	168,300	134,600	336,600	13	12	30	12	4	3 1/2	5 1/4
B6-SWG1000	Black	229,500	183,600	459,000	14 1/2	15.6	30	13 1/2	4 1/2	4	5 3/4

8 PART BRAIDED ROUNDSLINGS

LIFT CAPACITIES ACCORDING TO TYPE (COLOR) AND HITCH USED

Code	Color	Rated Capacities in Pounds			Min. Length (ft.)	Weight (lbs/ft.)	Standard Eye (in.)	Width at Load (in.)	Thickness at Load (in.)	Min. Hardware Diameter (in.)	Eye Diameter (in.)
		Vertical	Choker	Basket							
B8-SWG30	Purple	8,800	7,100	17,600	4 1/2	1.1	15	3 1/2	1	3/4	1 3/4
B8-SWG60	Green	18,000	14,400	36,000	5	1.5	15	4	1 1/2	1 1/8	2
B8-SWG90	Yellow	28,500	22,800	57,000	5 1/2	2.2	15	4 3/4	1 5/8	1 1/2	2 1/2
B8-SWG120	Tan	36,000	28,800	72,000	5 1/2	2.6	15	5	1 3/4	1 1/2	2 1/2
B8-SWG150	Red	44,900	35,900	89,800	6 1/2	3.6	20	6	2 1/4	1 3/4	2 3/4
B8-SWG180	Orange	57,100	45,600	114,200	7	4.1	20	6 1/4	2 1/2	2	3 1/4
B8-SWG240	Blue	72,000	57,600	144,000	9	5.6	20	7 1/2	2 3/4	2	3 3/4
B8-SWG300	Orange	84,800	67,800	169,600	9	6.6	24	8 1/2	3	2 1/2	4 1/4
B8-SWG360	Grey	105,400	84,300	210,800	9 1/2	8.3	30	9 1/2	3 1/4	2 1/2	4 1/2
B8-SWG500	Orange	135,700	108,500	271,400	10	9.5	30	11 1/2	3 1/2	3 1/2	5 1/4
B8-SWG600	Brown	180,200	144,100	360,400	10 1/2	12	30	13	3 3/4	3 1/2	5 1/2
B8-SWG800	Olive	224,400	179,500	448,800	13	16	30	13 1/2	4 1/2	4	6
B8-SWG1000	Black	306,000	244,000	612,000	14 1/2	20	30	15 3/4	5 1/4	4 3/4	6 1/2

*** This is the smallest recommended connection hardware diameter to be used for a vertical hitch*
• Braided Roundslings length tolerance is ±5% of the ordered length (sling at rest).
• At its rated capacity, a braided roundsling will stretch approximately 9%
• Matched Sets must be specified at the time of order.
• Shorter lengths available using smaller eye lengths.

WARNING
Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Stage Slings

BENEFITS OF STEEL WIRE CORE OVER OTHER RIGGING OPTIONS

- Improved cut resistance over standard polyester yarn core roundsling.
- Higher heat resistance over standard polyester yarn core roundsling.
- More flexible than standard wire rope sling, conforms to load for better grip.
- Lighter than standard wire rope slings, thus easier to handle and lower shipping costs.

STAGE SLINGS - BLACK

Core	Code	Rated Capacities in Pounds			Basket	Min. Length (ft.)	Approx Weight (lbs/ft.)
		Color	Vertical	Choker			
Polyester Yarn	SWG30BS	Black	2,650	2,120	5,300	1.5	0.20
Polyester Yarn	SWG60BS	Black	5,300	4,240	10,600	1.5	0.30
Polyester Yarn	SWG90BS	Black	8,400	6,720	16,800	2.0	0.50
Steel Wire	SWG60FF	Black	5,300	4,240	10,600	3.0*	0.86

** Max. length on steel wire core sling is 9 ft.*
• All stage slings are made with a single wall nylon jacket.
• Endless style of roundslings are made to a tolerance of ± 1% of the specified length (± 1% minimum tolerance) and can stretch 3% at rated capacity.

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WARNING
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Cordage

CORDAGE 3 - STRAND

COMPARATIVE WEIGHT STRENGTH AND WORKING LOAD CHART

Nominal Size		Manila			Nylon			Polypropylene		
Diameter	Circumference	Linear Density (Lbs/100ft)	MBS (in Lbs)	WLL (Lbs) Design Factor 12	Linear Density (Lbs/100ft)	MBS (in Lbs)	WLL (Lbs) Design Factor 12	Linear Density (Lbs/100ft)	MBS (in Lbs)	WLL (Lbs) Design Factor 12
3/16	5/8	1.37	405	33.8	0.89	880	73	0.65	730	61
1/4	3/4	1.82	540	45	1.57	1,490	124	1.15	1,260	105
5/16	1	2.64	900	75	2.45	2,300	192	1.80	1,915	160
3/8	1 1/8	3.79	1,215	101	3.55	3,240	270	2.60	2,720	227
7/16	1 1/4	4.87	1,575	131	4.80	4,320	360	3.50	3,525	294
1/2	1 1/2	6.96	2,385	199	6.30	5,670	473	4.60	4,235	353
9/16	1 3/4	9.63	3,105	259	8.00	7,200	600	5.90	5,140	428
5/8	2	12.7	3,960	330	9.90	8,910	743	7.20	6,250	521
3/4	2 1/4	15.9	4,860	405	14.3	12,800	1,070	10.4	8,570	714
7/8	2 3/4	21.4	6,930	578	19.5	17,300	1,440	14.2	11,600	967
1	3	25.7	8,100	675	25.3	22,200	1,850	18.0	14,400	1,200
1 1/16	3 1/4	29.8	9,450	788	28.7	25,200	2,100	20.4	16,100	1,342
1 1/8	3 1/2	34.3	10,800	900	32.2	28,300	2,360	22.8	17,900	1,492
1 1/4	3 3/4	39.7	12,150	1,013	39.7	34,800	2,900	27.6	21,700	1,808
1 5/16	4	45.6	13,500	1,125	43.7	38,300	3,190	30.4	23,700	1,975
1 1/2	4 1/2	57.0	16,650	1,388	57.0	48,600	4,050	39.4	30,600	2,550
1 5/8	5	71.1	20,250	1,688	67.3	57,400	4,780	46.0	35,800	2,983
1 3/4	5 1/2	85.0	23,850	1,988	78.0	66,100	5,510	53.0	41,300	3,442
2	6	102	27,900	2,325	100	84,600	7,050	69.0	52,400	4,367
2 1/8	6 1/2	120	32,400	2,700	113	95,400	7,950	78.0	59,000	4,917
2 1/4	7	139	36,900	3,075	127	107,000	8,920	88.0	66,500	5,542
2 1/2	7 1/2	164	42,300	3,525	157	131,000	10,900	107	80,600	6,717
2 5/8	8	182	46,800	3,900	173	144,000	12,000	120	90,200	7,517
2 3/4	8 1/2	215	54,900	4,575	208	171,000	14,300	141	105,800	8,817
3	9	230	57,500	4,792	226	185,000	15,400	153	114,900	9,575
3 1/4	10	284	69,500	5,792	275	224,000	18,700	186	136,000	11,333
3 1/2	11	349	81,900	6,825	329	267,000	22,300	223	161,300	13,442
4	12	414	94,500	7,875	400	324,000	27,000	272	192,500	16,042
4 1/4	13	-	-	-	460	369,000	30,800	315	221,800	18,483
4 1/2	14	-	-	-	525	419,000	34,900	360	250,000	20,833
5	15	-	-	-	610	481,000	40,100	420	287,300	23,942
5 5/16	16	-	-	-	685	533,000	44,400	474	321,600	26,800
5 5/8	17	-	-	-	767	590,000	49,200	531	357,800	29,817
6	18	-	-	-	870	661,000	55,100	603	401,200	33,133

- *Diameters are approximate. The reference for rope size is its linear density or weight per unit length.*
- *Linear Density is considered standard. Tolerances are ± 10% for diameters below 8 mm inclusive; ± 8% for diameters 10-14 mm inclusive; ± 5% for 16 mm diameter and larger.*
- *Minimum Breaking Strength (MBS) values in individual rope standards are based on data from a number of rope manufacturers and the result of computation by regression analysis.*
- *The MBS values are based on ropes tested with Eye Splices, making the values approximately 10 % lower than ropes tested without splices.*
- *Working Load Limit (WLL) is determined by dividing the new rope MBS by a selected Design Factor.*

CAUTION

- Working loads are recommended guidelines only.
- Specs are based on test of new and unused ropes of current manufacturers.
- Once rope is put into service it is continuously deteriorating.
- Manila rope will deteriorate in storage even under ideal conditions.

WARNING

Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Spectra® 12 Strand & 12 x 12

Specific gravity:	**0.98***
Melting point:	**284°F (140°C)**
Critical temp.:	**150°F (65°C)**
Coefficient of friction:	**0.09-.12***
Elongation at break:	**6% – 8%**
Fiber water absorption:	**0%**
UV resistance:	**moderate**
Wet abrasion:	**superior**
Dry abrasion:	**superior**

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

AUTHORIZED DISTRIBUTOR

CORTLAND®

TYPE APPROVED PRODUCT

DNV ABS

SPECTRA® 12 STRAND & 12 X 12

	Nominal Diameter		Size (circ in.)	Approximate Weight		Min Tensile Strength	
	Inch	MM		Lbs/100 ft.	Kg/100 m	Lbs	kN
12 Strand	7/64	2.5	5/16	0.33	0.50	1,125	5.00
	1/8	3	3/8	0.53	0.80	1,800	8.00
	3/16	5	9/16	1.00	1.50	3,600	16.0
	1/4	6	3/4	1.60	2.40	6,000	26.7
	5/16	8	15/16	2.60	3.90	9,000	40.0
	ABS and DNV Type Approved Sizes						
12 Strand	3/8	9	1-1/8	3.70	5.50	13,900	61.8
	7/16	11	1-1/4	4.20	6.30	14,800	65.8
	1/2	12	1-1/2	6.40	9.50	22,500	100.1
	9/16	14	1-3/4	7.90	11.8	27,700	123.2
	5/8	16	2	10.6	15.8	36,600	162.8
	3/4	18	2-1/4	13.3	19.8	43,200	192.2
	7/8	22	2-3/4	19.6	29.2	61,000	271.3
	1	24	3	23.4	34.8	72,000	320.3
	1-1/16	26	3-1/4	27.6	41.1	81,000	360.3
	1-1/8	28	3-1/2	31.9	47.5	91,800	408.3
	1-1/4	30	3-3/4	36.2	53.9	102,600	456.4
	1-5/16	32	4	41.7	62.1	114,300	508.4
	1-1/2	36	4-1/2	51.7	76.9	141,300	628.5
	1-5/8	40	5	65.7	97.8	167,400	744.6
	1-3/4	44	5-1/2	78.4	116.7	198,000	880.7
12 x 12	2	48	6	91.4	136.0	225,000	1000.8
	2-1/8	52	6-1/2	109.0	162.2	270,000	1201.0
	2-1/4	56	7	122.0	181.6	317,700	1413.2
	2-1/2	60	7-1/2	148.0	220.3	360,000	1601.4
	2-5/8	64	8	167.0	248.5	370,800	1649.4
	2-3/4	68	8-1/2	187.0	278.3	405,000	1801.5
	3	72	9	214.0	318.5	508,500	2261.9
	3-1/4	80	10	261.0	388.4	616,500	2742.3
	3-5/8	88	11	324.0	482.2	765,000	3402.9
	4	96	12	394.0	586.4	900,000	4003.4

- *Sizes available up to 8-1/4" diameter (200mm). Tensile Strengths are determined in accordance with Cordage Institute 1500. Test Methods for Fiber Rope. Weights are calculated at linear density under standard preload (200d²) plus 4%. See page 21 for application and safety information.*
- *Spectra is a Registered Trademark of Honeywell.*

Spectra® 12 strand provides very high strength, low stretch and excellent abrasion resistance in a single braid construction. The equivalent weight rope is more than 3 times as strong as polyester and has less than one half of the elongation.

Spectra® 12 strand is delivered standard with a polyurethane finish and is easily spliced using a simple lockstitch type splice, 4-3-2 or 5-4-3 Tuck Splice. Its soft, torque free braided construction provides easy handling.

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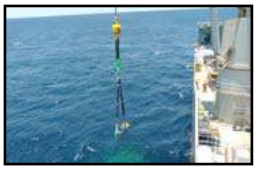
Spectra® 12 Strand & 12 x 12



Rope Specifications

Minimum Tensile Strengths Minimum Tensile Strengths shown are for new (unused) rope and will decrease after use. All tests are performed in accordance with Cordage Institute Standard CI 1500-2. The rope strength will be reduced after use due to heat, abrasion, ultraviolet or chemical exposure. The tensile strengths may be further reduced by up to 50% as a result of knots or kinks. Minimum Tensile Strengths are defined as two standard deviations (typical about 10%) below the average.

Maximum Working Loads Maximum Working Loads are determined by dividing the tensile strength by the safety factor. The safety factor is a function of the physical properties of the rope, age and history, the type of service it will be subjected to and the risks involved if failure occurs. For a rope manufacturer to give blanket working load recommendations would be like a car manufacturer giving the "safe driving speed" of their cars. Obviously the conditions of use far outweigh the design characteristics of the rope. Typically safety factors vary from 3:1 (for new rope used in applications with uniform loading and where failure would cause little or no risk to equipment or personnel) to 20:1 (for conditions involving moderate shock loading, possibility of snags or kinks or where failure could cause severe risk to equipment or personnel).

Rope Weights Rope Weights shown are average and may vary plus or minus 5%.

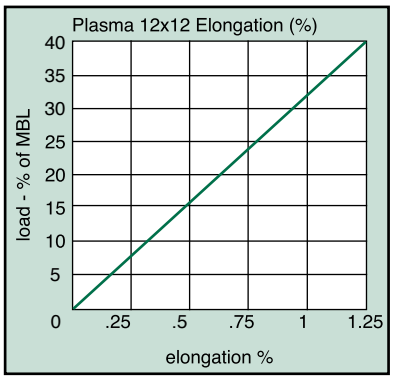
Working Elongation Working Elongation is shown from a preload tension of 200 times the diameter squared per the Cordage Institute Standard.

Special Requirements

Factory Splicing Various types are available for all of our ropes. Splices can be provided with various types of chafe protection or coatings.

Custom Lengths Special constructions are available upon customer request.

Rope Terminations Southern Wire can provide custom terminations such as thimbles, links, rings, and custom hardware. Terminations are available in plastic, bronze, stainless steel and galvanized steel. Please call or fax your requirements for a quotation.



Special Coatings Coatings such as polyurethane, polyethylene and vinylesters may be applied to any of the synthetic ropes to improve snag resistance, sunlight resistance or for color coding. Southern Wire can provide ropes with a variety of finishes to meet your needs.

Commercial and Military Specifications Certificates of compliance are supplied at no charge if requested when placing the order. Certified test reports can be provided at an additional charge when requested at the time of order.

Features & Benefits

- Very low stretch
- Very high strength
- Soft hand
- Torque free
- Easy splicing
- Floats

Applications

- Vessel mooring lines
- Tug winch lines
- Emergency towlines
- Utility winch and pulling lines
- Recreational vehicle winch lines
- Theatrical rigging lines

WARNING
Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Plasma® 12 Strand

Specific gravity:	**0.98***
Melting point:	**284°F (140°C)**
Critical temp.:	**150°F (65°C)**
Coefficient of friction:	**0.09-.12***
Elongation at break:	**4% – 5%**
Fiber water absorption:	**0%**
UV resistance:	**moderate**
Wet abrasion:	**superior**
Dry abrasion:	**superior**

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

AUTHORIZED DISTRIBUTOR

CORTLAND®

TYPE APPROVED PRODUCT

DNV ABS

PLASMA® 12 STRAND

Nominal Diameter		Size	Approximate Weight		Min Tensile Strength	
Inch	MM	(circ in.)	Lbs/100 ft.	Kg/100 m	Lbs	Te (tonnes)
0.04	1	0.12	0.05	0.10	270	0.10
0.05	1.25	0.15	0.07	0.10	390	0.20
0.06	1.5	0.18	0.10	0.10	475	0.20
0.07	1.75	0.21	0.14	0.20	750	0.30
0.1	2.5	0.30	0.27	0.40	1,400	0.60
1/8	3	3/8	0.54	0.80	2,800	1.30
3/16	5	9/16	1.12	1.70	5,500	2.50
1/4	6	3/4	1.60	2.40	8,000	3.60
5/16	8	15/16	2.50	3.70	11,700	5.30
3/8	9	1-1/8	3.70	5.50	17,500	7.90
ABS and DNV Type Approved Sizes						
7/16	11	1-1/4	4.20	6.30	21,000	9.50
1/2	12	1-1/2	6.40	9.50	31,300	14.2
9/16	14	1-3/4	7.90	11.8	37,900	17.2
5/8	16	2	10.6	15.8	51,400	23.3
3/4	18	2-1/4	13.3	19.8	68,500	31.1
13/16	20	2-1/2	15.9	23.7	74,000	33.6
7/8	22	2-3/4	19.6	29.2	92,600	42.0
1	24	3	23.4	34.8	110,000	49.9
1-1/16	26	3-1/4	27.5	40.9	129,200	58.6
1-1/8	28	3-1/2	31.9	47.5	147,000	66.7
1-1/4	30	3-3/4	36.2	53.9	165,000	74.9
1-5/16	32	4	41.7	62.1	196,000	88.9
1-1/2	36	4-1/2	51.7	76.9	221,000	100.3

12 Strand

• 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 state preloaded (200d²) plus 4%. Diameter and circumference size published is nominal and reflects rope size after loading (10 cycles) to 50% of MTS. See reverse side for application and safety information.

• Plasma is a Trademark of Cortland.

Plasma® 12 strand is the highest strength synthetic rope available. Plasma® 12 strand is manufactured from High Modulus Polyethylene (HMPE) that has been enhanced by Cortland's patented recrystallization 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® 12 strand is delivered standard with a polyurethane finish and is easily spliced using a simple lockstitch type splice, 4-3-2 or 5-4-3 Tuck Splice. Its soft, torque free braided construction provides easy handling.

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www.southernwire.com
2013 Synthetics Catalog. All data subject to change without notice.

WARNING
Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Plasma® 12 Strand

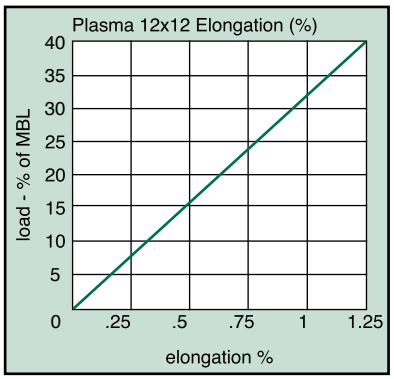
Rope Specifications

Minimum Tensile Strengths Minimum Tensile Strengths shown are for new (unused) rope and will decrease after use. All tests are performed in accordance with Cordage Institute Standard CI 1500-2. The rope strength will be reduced after use due to heat, abrasion, ultraviolet or chemical exposure. The tensile strengths may be further reduced by up to 50% as a result of knots or kinks. Minimum Tensile Strengths are defined as two standard deviations (typical about 10%) below the average.

Maximum Working Loads Maximum Working Loads are determined by dividing the tensile strength by the safety factor. The safety factor is a function of the physical properties of the rope, age and history, the type of service it will be subjected to and the risks involved if failure occurs. For a rope manufacturer to give blanket working load recommendations would be like a car manufacturer giving the "safe driving speed" of their cars. Obviously the conditions of use far outweigh the design characteristics of the rope. Typically safety factors vary from 3:1 (for new rope used in applications with uniform loading and where failure would cause little or no risk to equipment or personnel) to 20:1 (for conditions involving moderate shock loading, possibility of snags or kinks or where failure could cause severe risk to equipment or personnel).

Rope Weights Rope Weights shown are average and may vary plus or minus 5%.

Working Elongation Working Elongation is shown from a preload tension of 200 times the diameter squared per the Cordage Institute Standard.



Special Requirements

Factory Splicing Various types are available for all of our ropes. Splices can be provided with various types of chafe protection or coatings.

Custom Lengths Special constructions are available upon customer request.

Rope Terminations Southern Wire can provide custom terminations such as thimbles, links, rings, and custom hardware. Terminations are available in plastic, bronze, stainless steel and galvanized steel. Please call or fax your requirements for a quotation.

Special Coatings Coatings such as polyurethane, polyethylene and vinylesters may be applied to any of the synthetic ropes to improve snag resistance, sunlight resistance or for color coding. Southern Wire can provide ropes with a variety of finishes to meet your needs.

Commercial and Military Specifications Certificates of compliance are supplied at no charge if requested when placing the order. Certified test reports can be provided at an additional charge when requested at the time of order.

Features & Benefits

- Lowest stretch
- Highest strength
- Low creep
- Soft hand
- Torque free
- Easy splicing
- Floats

Applications

- Replacement for wire rope
- Vessel mooring lines
- Inland river barge lines
- Lifting slings
- Recreational vehicle winch lines
- Utility winch and pulling lines
- Theatrical rigging lines

WARNING
Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Plasma® 12 x 12

Specific gravity:	**0.98***
Melting point:	**284°F (140°C)**
Critical temp.:	**150°F (65°C)**
Coefficient of friction:	**0.09-.12***
Elongation at break:	**4% – 5%**
Fiber water absorption:	**0%**
UV resistance:	**moderate**
Wet abrasion:	**superior**
Dry abrasion:	**superior**

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

AUTHORIZED DISTRIBUTOR

CORTLAND®

TYPE APPROVED PRODUCT

DNV ABS

PLASMA® 12 X 12								
Nominal Diameter		Size	Approximate Weight		Min Tensile Strength Spliced Rope		Min Tensile Strength ISO Unspliced Rope	
Inch	MM	(circ in.)	Lbs/100 ft.	Kg/100 m	Lbs	MT (tonnes)	Lbs	MT (tonnes)
ABS and DNV Type Approved Sizes - Up to 4" Diameter (96mm)								
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
5 3/4	140	17 1/2	871	1296	2,782,500	1262	3,092,000	1403
6	144	18	932	1386	2,925,000	1327	3,250,000	1475
6 1/8	148	18 1/2	985	1465	3,068,000	1392	3,409,000	1547
6 1/4	152	19	1038	1545	3,210,500	1457	3,567,000	1618
6 1/2	156	19 1/2	1103	1642	3,353,000	1521	3,726,000	1691
6 5/8	160	20	1159	1725	3,496,000	1586	3,884,000	1762
6 3/4	164	20 1/2	1227	1827	3,638,500	1651	4,043,000	1834
7	168	21	1284	1911	3,781,000	1716	4,201,000	1906
7 1/8	172	21 1/2	1334	1986	3,963,500	1798	4,404,000	1998
7 1/4	176	22	1392	2072	4,066,000	1845	4,518,000	2050
7 1/2	180	22 1/2	1452	2161	4,209,000	1910	4,677,000	2122
7 5/8	184	23	1527	2272	4,351,500	1974	4,835,000	2194
7 3/4	188	23 1/2	1589	2365	4,494,000	2039	4,993,000	2265
8	192	24	1653	2459	4,637,000	2104	5,152,000	2338
8 1/8	196	24 1/2	1732	2578	4,779,000	2168	5,310,000	2409
8 1/4	200	25	1798	2677	4,922,000	2233	5,469,000	2481

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 ($200d^2$) plus 4%. For this chart, sizes 4 1/8" – 8 1/4" diameter represent un-cycled, (non-stablized weights).*

Tensile Strengths: *Tensile Strength determined in accordance with Cordage Institute 1500 Test Methods for Fiber Ropes and ISO 2307.*

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WARNING
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Plasma® 12 x 12

Plasma® 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. Plasma® 12x12 is manufactured from High Modulus Polyethylene (HMPE) that has been enhanced by Cortland's patented recrystallization 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.

This patented 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. Plasma® 12x12 is supplied with our standard polyurethane finish, although other coatings can be applied to suit specific applications.

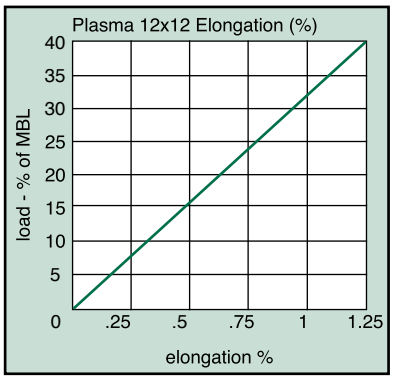
Rope Specifications

Minimum Tensile Strengths Minimum Tensile Strengths shown are for new (unused) rope and will decrease after use. All tests are performed in accordance with Cordage Institute Standard CI 1500-2. The rope strength will be reduced after use due to heat, abrasion, ultraviolet or chemical exposure. The tensile strengths may be further reduced by up to 50% as a result of knots or kinks. Minimum Tensile Strengths are defined as two standard deviations (typical about 10%) below the average.

Maximum Working Loads Maximum Working Loads are determined by dividing the tensile strength by the safety factor. The safety factor is a function of the physical properties of the rope, age and history, the type of service it will be subjected to and the risks involved if failure occurs. For a rope manufacturer to give blanket working load recommendations would be like a car manufacturer giving the "safe driving speed" of their cars. Obviously the conditions of use far outweigh the design characteristics of the rope. Typically safety factors vary from 3:1 (for new rope used in applications with uniform loading and where failure would cause little or no risk to equipment or personnel) to 20:1 (for conditions involving moderate shock loading, possibility of snags or kinks or where failure could cause severe risk to equipment or personnel).

Rope Weights Rope Weights shown are average and may vary plus or minus 5%.

Working Elongation Working Elongation is shown from a preload tension of 200 times the diameter squared per the Cordage Institute Standard.



Special Requirements

Factory Splicing Various types are available for all of our ropes. Splices can be provided with various types of chafe protection or coatings.

Custom Lengths Special constructions are available upon customer request.

Rope Terminations Southern Wire can provide custom terminations such as thimbles, links, rings, and custom hardware. Terminations are available in plastic, bronze, stainless steel and galvanized steel. Please call or fax your requirements for a quotation.

Special Coatings Coatings such as polyurethane, polyethylene and vinylesters may be applied to any of the synthetic ropes to improve snag resistance, sunlight resistance or for color coding. Southern Wire can provide ropes with a variety of finishes to meet your needs.

Commercial and Military Specifications Certificates of compliance are supplied at no charge if requested when placing the order. Certified test reports can be provided at an additional charge when requested at the time of order.

Features & Benefits

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

Applications

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

WARNING
Do not exceed rated capacities. Sling capacity decreases as the angle decreases. Do not use at an angle less than 30° from horizontal.

Plasma® Eye & Eye Slings

Plasma® Sling Ratings in Hitch Configurations

Vertical, choker and basket hitches.
Basket hitches at varying angles
ratings based on Design Factor of 5:1

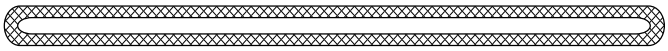
Vertical	Choker	90°	60°	45°	30°
	120° or >				

PLASMA® EYE & EYE SLINGS

Nominal Size				Sling Ratings in Pounds					
Dia. Inches	Dia. MM	Circ. Inches	MBL lbs.	Plasma® 12 Strand – 12 x 12 Construction					
1	24	3	110,000	22,000	17,600	44,000	37,400	30,800	22,000
1 1/16	26	3 1/4	129,200	25,840	20,672	51,680	43,928	36,176	25,840
1 1/8	28	3 1/2	147,000	29,400	23,520	58,800	49,980	41,160	29,400
1 1/4	30	3 3/4	165,000	33,000	26,400	66,000	56,100	46,200	33,000
1 5/16	32	4	196,000	39,200	31,360	78,400	66,640	54,880	39,200
1 1/2	36	4 1/2	221,000	44,200	35,360	88,400	75,140	61,880	44,200
				Plasma® 12 x 12					
1 5/8	40	5	291,000	58,200	46,560	116,400	98,940	81,480	58,200
1 3/4	44	5 1/2	314,000	62,800	50,240	125,600	106,760	87,920	62,800
2	48	6	355,000	71,000	56,800	142,000	120,700	99,400	71,000
2 1/8	52	6 1/2	428,000	85,600	68,480	171,200	145,520	119,840	85,600
2 1/4	56	7	481,000	96,200	76,960	192,400	163,540	134,680	96,200
2 1/2	60	7 1/2	530,000	106,000	84,800	212,000	180,200	148,400	106,000
2 5/8	64	8	596,000	119,200	95,360	238,400	202,640	166,880	119,200
2 3/4	68	8 1/2	660,000	132,000	105,600	264,000	224,400	184,800	132,000
3	72	9	780,000	156,000	124,800	312,000	265,200	218,400	156,000
3 1/8	76	9 1/2	850,000	170,000	136,000	340,000	289,000	238,000	170,000
3 1/4	80	10	940,000	188,000	150,400	376,000	319,600	263,200	188,000
3 1/2	84	10 1/2	1,108,000	221,600	177,280	443,200	376,720	310,240	221,600
3 5/8	88	11	1,250,000	250,000	200,000	500,000	425,000	350,000	250,000
3 3/4	92	11 1/2	1,317,000	263,400	210,720	526,800	447,780	368,760	263,400
4	96	12	1,520,000	304,000	243,200	608,000	516,800	425,600	304,000
4 1/8	100	12 1/2	1,622,000	324,400	259,520	648,800	551,480	454,160	324,400
4 1/4	104	13	1,697,000	339,400	271,520	678,800	576,980	475,160	339,400
4 1/2	108	13 1/2	1,827,000	365,400	292,320	730,800	621,180	511,560	365,400
4 5/8	112	14	1,880,000	376,000	300,800	752,000	639,200	526,400	376,000
4 3/4	116	14 1/2	1,927,000	385,400	308,320	770,800	655,180	539,560	385,400
5	120	15	2,069,500	413,900	331,120	827,800	703,630	579,460	413,900
5 1/8	124	15 1/2	2,212,000	442,400	353,920	884,800	752,080	619,360	442,400
5 1/4	128	16	2,355,000	471,000	376,800	942,000	800,700	659,400	471,000
5 1/2	132	16 1/2	2,497,500	499,500	399,600	999,000	849,150	699,300	499,500
5 5/8	136	17	2,640,000	528,000	422,400	1,056,000	897,600	739,200	528,000
5 3/4	140	17 1/2	2,782,500	556,500	445,200	1,113,000	946,050	779,100	556,500
6	144	18	2,925,000	585,000	468,000	1,170,000	994,500	819,000	585,000
6 1/8	148	18 1/2	3,068,000	613,500	490,880	1,227,200	1,043,120	859,040	613,600
6 1/4	152	19	3,210,500	642,100	513,680	1,284,200	1,091,570	898,940	642,100
6 1/2	156	19 1/2	3,353,000	670,600	536,480	1,341,200	1,140,020	938,840	670,600
6 5/8	160	20	3,496,000	699,200	559,360	1,398,400	1,188,640	978,880	699,200
6 3/4	164	20 1/2	3,638,500	727,700	582,160	1,455,400	1,237,090	1,018,780	727,700
7	168	21	3,781,000	756,200	604,960	1,512,400	1,285,540	1,058,680	756,200
7 1/8	172	21 1/2	3,963,500	792,700	634,160	1,585,400	1,347,590	1,109,780	792,700
7 1/4	176	22	4,066,000	813,200	650,560	1,626,400	1,382,440	1,138,480	813,200
7 1/2	180	22 1/2	4,209,000	841,800	673,440	1,683,600	1,431,060	1,178,520	841,800
7 5/8	184	23	4,351,500	870,300	696,240	1,740,600	1,479,510	1,218,420	870,300
7 3/4	188	23 1/2	4,494,000	898,800	719,040	1,797,600	1,527,960	1,258,320	898,800
8	192	24	4,637,000	927,400	741,920	1,854,800	1,576,580	1,298,360	927,400
8 1/8	196	24 1/2	4,779,000	955,800	764,640	1,911,600	1,624,860	1,338,120	955,800
8 1/4	200	25	4,922,000	984,400	787,520	1,968,800	1,673,480	1,378,160	984,400

• Minimum Break Load (MBL) in pounds and is determined using spliced test samples in accordance with Cordage Institute 1500-02 – Test Method for Fiber Ropes
• The recommended Design Factor (DF) of 5:1 on this chart is based on several existing lifting sling standards including ASME B30.9. This DF takes into account various factors including the use of HMPE (High Modulus Polyetheylene) fiber which is extremely durable and resistant to repeated high loads. Plasma® rope slings have and can be used with different DF ratios: however, this decision must be made by a qualified person or designer of the lift in conjunction with the rope manufacturer. Cortland does not recommend the use of slings in a choker hitch at a lifting angle less than 120°.

Plasma® Endless Grommet Slings



Plasma® Sling Ratings in Hitch Configurations

One splice in one leg
Vertical, choker and basket hitches.
Basket hitches at varying angles

Vertical	Choker	90°	60°	45°	30°
	120° or >				

PLASMA® ENDLESS GROMMET SLINGS

Nominal Size				Sling Ratings in Pounds					
Dia. Inches	Dia. MM	Circ. Inches	MBL lbs.	Plasma® 12 Strand – 12 x 12 Construction					
1	24	3	181,500	36,300	29,040	65,340	55,539	45,738	36,300
1 1/16	26	3 1/4	213,180	42,636	34,109	76,745	65,233	53,721	42,636
1 1/8	28	3 1/2	242,550	48,510	38,808	87,318	74,220	61,123	48,510
1 1/4	30	3 3/4	272,250	54,450	43,560	98,010	83,309	68,607	54,450
1 5/16	32	4	323,400	64,680	51,744	116,424	98,960	81,497	64,680
1 1/2	36	4 1/2	364,650	72,930	58,344	131,274	111,583	97,892	72,930
				Plasma® 12 x 12					
1 5/8	40	5	480,150	96,030	76,824	172,854	146,926	120,998	96,030
1 3/4	44	5 1/2	518,100	103,620	82,896	186,516	158,539	130,561	103,620
2	48	6	585,750	117,150	93,720	210,870	179,240	147,609	117,150
2 1/8	52	6 1/2	706,200	141,240	112,992	254,232	216,097	177,962	141,240
2 1/4	56	7	793,650	158,730	126,984	285,714	242,857	200,000	158,730
2 1/2	60	7 1/2	874,500	174,900	139,920	314,820	267,597	220,374	174,900
2 5/8	64	8	983,400	196,680	157,344	354,024	300,920	247,817	196,680
2 3/4	68	8 1/2	1,089,000	217,800	174,240	392,040	333,234	274,428	217,800
3	72	9	1,287,000	257,400	205,920	463,320	393,822	324,324	257,400
3 1/8	76	9 1/2	1,402,500	280,500	224,400	504,900	429,165	353,430	280,500
3 1/4	80	10	1,551,000	310,200	248,160	558,360	474,606	390,852	310,200
3 1/2	84	10 1/2	1,828,200	365,640	292,512	658,152	559,429	460,706	365,640
3 5/8	88	11	2,062,500	412,500	330,000	742,500	631,125	519,750	412,500
3 3/4	92	11 1/2	2,173,050	434,610	347,688	782,298	664,953	547,609	434,610
4	96	12	2,508,000	501,600	401,280	902,880	767,448	632,016	501,600
4 1/8	100	12 1/2	2,676,300	535,260	428,208	963,468	818,948	674,428	535,260
4 1/4	104	13	2,800,050	560,010	448,008	1,008,018	856,815	705,613	560,010
4 1/2	108	13 1/2	3,014,550	602,910	482,328	1,085,238	922,452	759,667	602,910
4 5/8	112	14	3,102,000	620,400	496,320	1,116,720	949,212	781,704	620,400
4 3/4	116	14 1/2	3,179,550	635,910	508,728	1,144,638	972,942	801,247	635,910
5	120	15	3,414,675	682,935	546,348	1,229,283	1,044,891	860,498	682,935
5 1/8	124	15 1/2	3,649,800	729,960	583,968	1,313,928	1,116,839	919,750	729,960
5 1/4	128	16	3,885,750	777,150	621,720	1,398,870	1,189,040	979,209	777,150
5 1/2	132	16 1/2	4,120,875	824,175	659,340	1,483,515	1,260,988	1,038,461	824,175
5 5/8	136	17	4,356,000	871,200	696,960	1,568,160	1,332,936	1,097,712	871,200
5 3/4	140	17 1/2	4,591,125	918,225	734,580	1,652,805	1,404,884	1,156,964	918,225
6	144	18	4,826,250	965,250	772,200	1,737,450	1,476,833	1,216,215	965,250
6 1/8	148	18 1/2	5,062,200	1,012,440	809,952	1,822,392	1,549,033	1,275,674	1,012,440
6 1/4	152	19	5,297,325	1,059,465	847,572	1,907,037	1,620,981	1,334,926	1,059,465
6 1/2	156	19 1/2	5,532,450	1,106,490	885,192	1,991,682	1,692,930	1,394,177	1,106,490
6 5/8	160	20	5,768,400	1,153,680	922,644	2,076,624	1,765,130	1,453,637	1,153,680
6 3/4	164	20 1/2	6,003,525	1,200,705	960,564	2,161,269	1,837,079	1,512,888	1,200,705
7	168	21	6,238,650	1,247,730	998,184	2,245,914	1,909,027	1,572,140	1,247,730
7 1/8	172	21 1/2	6,539,775	1,307,955	1,046,364	2,354,319	2,001,171	1,648,023	1,307,955
7 1/4	176	22	6,708,900	1,341,780	1,073,424	2,415,204	2,052,923	1,690,643	1,341,780
7 1/2	180	22 1/2	6,944,850	1,388,970	1,111,176	2,500,146	2,125,124	1,750,102	1,388,970
7 5/8	184	23	7,179,975	1,435,995	1,148,796	2,584,791	2,197,072	1,809,354	1,435,995
7 3/4	188	23 1/2	7,415,100	1,483,020	1,186,416	2,669,436	2,269,021	1,868,605	1,483,020
8	192	24	7,651,050	1,530,210	1,224,168	2,754,378	2,341,221	1,925,065	1,530,210
8 1/8	196	24 1/2	7,885,350	1,577,070	1,261,656	2,838,726	2,412,917	1,987,108	1,577,070
8 1/4	200	25	8,121,300	1,624,260	1,299,408	2,923,668	2,485,118	2,046,568	1,624,260

• MBL rating of a Plasma® rope in a grommet sling form, is created by using the vertical leg MBL multiplied by 1.65. The grommet ratings are conservative and follow the guidelines established by the Cordage Institute. However, higher ratings may be used after consultation with the manufacturer.

• MBL rating of Plasma® rope endless grommet slings used in a vertical basket life is 1.8 times the vertical grommet MBL rating. This conservative value is used until further testing, especially on Large diameters can be performed. For lift applications or clarifcation, please contact Southern Wire. Cortland does not recommend the use of slings in a choker hitch at a lifting angle less than 120°.