

SYNTHETIC SLINGS

# Plasma<sup>®</sup> 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



PLASMA <sup>®</sup> 12 STRAND								
	Nominal Diameter		Size (circ in.)	Approximate Weight		Min Tensile Strength		
	Inch	MM		Lbs/100 ft.	Kg/100 m	Lbs	Te (tonnes)	
12 Strand	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		

• 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 (200d<sup>f</sup>) 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<sup>®</sup> 12 strand is the highest strength synthetic rope available.** Plasma<sup>®</sup> 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<sup>®</sup> 12 strand.

Plasma<sup>®</sup> 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.

AUTHORIZED DISTRIBUTOR



TYPE APPROVED PRODUCT



## WARNING

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



## 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%.

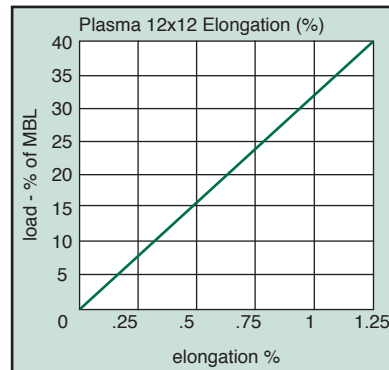
**Working Elongation** Working Elongation is shown from a preload tension of 200 times the diameter squared per the Cordage Institute Standard.

## 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

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1-(800)-238-0333  
[www.southernwire.com](http://www.southernwire.com)

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