Nylon 12 Plait

Nylon 12 Plait provides high strength, high elongation and excellent abrasion resistance in a single braid construction. Nylon 12 Plait is easily spliced using a standard tuck splice and is 25% stronger than three strand or 8 plait nylon. Its torque free braided construction provides easy handling and prevents kinks and hockles.

Nylon 12 Plait is available standard with an overlay marine finish.

Features & Benefits

- High stretch
- High strength
- Excellent shock absorption
- Soft hand
- Torque free
- Easy splicing

Applications

- Mooring lines
- Anchor lines
- KERR towing Lines
- Tug hawsers and stretchers
- Commercial fishing nets
- Security barriers

Type approved product

DNV·GL

ABS DESIGN ASSESSED

Nominal Diameter		Size (circ in.)	Approximate Weight		Minimum Tensile Strength Spliced Rope		Minimum Tensile Strength ISO Unspliced Rope	
inch	mm		lbs/ 100ft	kg/ 100m	lbs	MT (tonnes)	lbs	MT (tonnes)
5/8	16	2	11	16.4	13,900	6.3	15,400	7.0
3/4	18	2-1/4	15	22.3	17,900	8.1	19,900	9.0
7/8	22	2-3/4	22.6	33.6	26,200	11.9	29,100	13.2
1	24	3	26.3	39.1	30,100	13.7	33,400	15.2
1-1/8	28	3-1/2	33.8	50.3	39,400	17.9	43,800	19.9
1-1/4	30	3-3/4	39.5	58.8	45,400	20.6	50,400	22.9
1-5/16	32	4	45.1	67.1	51,200	23.2	56,900	25.8
1-1/2	36	4-1/2	56.4	83.9	64,800	29.4	72,000	32.7
1-5/8	40	5	67.7	100.8	76,300	34.6	84,800	38.5
1-3/4	44	5-1/2	79	117.6	92,100	41.8	102,300	46.4
2	48	6	95.9	142.7	106,500	48.3	118,300	53.7
2-1/8	52	6-1/2	113	168.2	128,000	58.1	142,200	64.5
2-1/4	56	7	135	200.9	152,000	69.0	168,900	76.6
2-1/2	60	7-1/2	152	226.2	170,000	77.1	188,900	85.7
2-5/8	64	8	169	251.5	189,000	85.8	210,000	95.3
2-3/4	68	8-1/2	192	285.7	214,000	97.1	237,800	107.9
3	72	9	222	330.4	245,000	111.2	272,200	123.5
3-1/4	80	10	271	403.3	288,000	130.7	320,000	145.2
3-5/8	88	11	321	477.7	338,000	153.4	375,600	170.4
4	96	12	389	578.9	418,000	189.7	464,400	210.7

Tensile Strengths are determined in accordance with Cordage Institute 1500, Test Methods for Fiber Rope. With extended immersion in water, all nylon ropes will lose up to 10% of their strength. Weights are calculated at linear density under standard preload ($200d^2$) plus 7%. See reverse side for application and safety information.

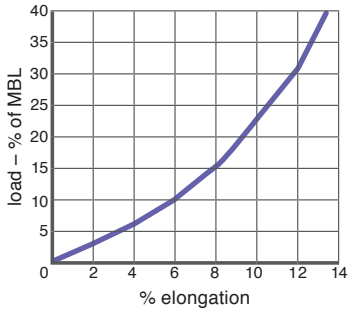
Please note that the Minimum Tensile Strengths of Black Nylon 12 Plait products are normally 15% below published specifications. Type approval of Nylon 12 Plait does not apply to Black Nylon 12 Plait.

Technical Information

Specific gravity	**1.14***
Melting point	**414°F (212°C)**
Critical temp.	**300°F (149°C)**
Coefficient of friction	**0.12–0.15***
Elongation at break	**30–35%**
Fiber water absorption	**3–5%**
UV resistance	**good**
Wet abrasion	**excellent**
Dry abrasion	**excellent**

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

Nylon 12 Plait Elongation (%)



CORTLAND™
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Nylon 12 Plait

Rope Specifications

Minimum Tensile Strength 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, the age and history of the rope, 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 on request.

Rope Terminations Cortland 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 email your requirements to cortland@cortlandcompany.com 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. Cortland 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 the order.