

# Nylon Double Braid

Nylon Double Braid is the preferred choice for applications requiring high strength with excellent shock absorbing properties. Double Braid has good resistance to abrasion, sunlight and chemicals. Due to its high elongation, nylon is almost always used in applications involving shock loading such as anchor lines and mooring lines.

Nylon Double Braid is delivered standard with an overlay marine finish.

## Features & Benefits

- High stretch
- High strength
- Excellent shock absorption
- Soft hand
- Torque free
- Meets MIL-DTL-24050

## Applications

- Anchor lines
- Mooring lines
- Shock absorbers
- Pendants
- Towlines
- Towed array stretchers

## Type approved product



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)
1/4	6	3/4	1.7	2.5	1,900	0.9	2,100	1.0
5/16	8	1	2.6	3.9	2,900	1.3	3,200	1.5
3/8	9	1-1/8	3.7	5.5	4,200	1.9	4,700	2.1
7/16	11	1-1/4	5.1	7.6	5,700	2.6	6,300	2.9
1/2	12	1-1/2	6.6	9.8	7,400	3.4	8,200	3.7
9/16	14	1-3/4	9	13.4	10,200	4.6	11,300	5.1

### ABS and DNV Type Approved Sizes

5/8	16	2	11.6	17.2	14,800	6.7	16,400	7.4
3/4	18	2-1/4	14.7	21.9	19,000	8.6	21,100	9.6
7/8	22	2-3/4	21.8	32.4	28,300	12.8	31,400	14.2
1	24	3	26	38.7	33,500	15.2	37,200	16.9
1-1/16	26	3-1/4	31	46.1	39,000	17.7	43,300	19.6
1-1/8	28	3-1/2	35.4	52.7	44,900	20.4	49,900	22.6
1-1/4	30	3-3/4	40.7	60.6	52,300	23.7	58,100	26.4
1-5/16	32	4	46.3	68.9	58,800	26.7	65,300	29.6
1-1/2	36	4-1/2	58.4	86.9	74,000	33.6	82,200	37.3
1-5/8	40	5	72.3	107.6	92,400	41.9	102,700	46.6
1-3/4	44	5-1/2	87.7	130.5	110,900	50.3	123,200	55.9
2	48	6	103.9	154.6	131,500	59.7	146,100	66.3
2-1/8	52	6-1/2	122	181.6	152,800	69.3	169,800	77.0
2-1/4	56	7	141.2	210.1	181,000	82.1	201,100	91.2
2-1/2	60	7-1/2	162.6	242	201,000	91.2	223,300	101.3
2-5/8	64	8	185.1	275.5	222,000	100.7	246,700	111.9
2-3/4	68	8-1/2	201.2	299.4	248,000	112.5	275,600	125.0
3	72	9	234.3	348.7	277,000	125.7	307,800	139.7
3-1/4	80	10	288.9	430	341,000	154.7	378,900	171.9
3-5/8	88	11	349.9	520.7	409,000	185.6	454,400	206.2
4	96	12	416.2	619.4	475,000	215.5	527,800	239.5
4-1/4	104	13	481.5	716.6	549,000	249.1	610,000	276.8

Tensile Strengths are determined in accordance with Cordage Institute 1500, Test Methods for Fiber Rope. Weights are calculated at linear density under standard preload (200d<sup>2</sup>) plus 4%. See reverse side for application and safety information.

Please note that the Minimum Tensile Strengths of Black Nylon Double Braid products are normally 10% below published specifications. Type Approval of Nylon Double Braid does not apply to Black Nylon Double Braid.

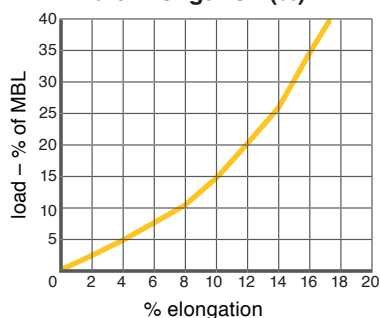
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## Technical Information

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	3–4%
UV resistance	good
Wet abrasion	excellent
Dry abrasion	excellent

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

Nylon Double Braid Elongation (%)



## 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.

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## 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](mailto:cortland@cortlandcompany.com) for a quotation.

**Special Coatings** Coatings such as polyurethane, polyethylene and vinyl esters 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.

