

## Dock Line Guidelines for Double Braid Nylon

American Boat and Yacht Council Safe Working Load (in pounds)			
Nylon Double Braided Rope			
Diameter"	Approx. Breaking Strength	ABYC Safe Working Load	Safe Working Load %
1/4	1,390	420	30%
5/16	2,170	680	31%
3/8	3,120	960	31%
1/2	5,550	1,630	29%
5/8	8,670	2,800	32%
3/4	12,490	3,600	29%
7/8	17,000	5,300	31%
1	22,210	6,260	28%



Boat Length	Dock Line Average	Heavy	Typical Eye splice Length
Up to 20' (6m)	3/8"	3/8"	6-12"
20' - 30' (6 - 9m)	7/16"	1/2"	6-12"
30' - 40' (9 - 12m)	1/2"	9/16"	7-14"
40' - 50' (12 - 15m)	5/8"	3/4"	8-16"
50' - 60' (15 - 18m)	3/4"	1"	9-18"

Rope Diameter	Fid Diameter (typ. 75-80%)	Typ. Fid Length (typ. 22 x Dia.)	Typ. Short Section Measure (typ. 1/3 Len.)	Typ. Long Section Measure
1/4		5.50	2.00	3.50
3/8		7.75	3.00	4.75
1/2	3/8	11.00	4.00	7.00
5/8	1/2	16.00	4.75	11.25
7/8		19.00	5.00	14.00
1		21.00	5.25	15.75

Other Dock line Considerations	
1	Not all rope is sold as true diameters. Some brands are typically 1/16" undersized (e.g. 1/2" D really 7/16" D).
2	Need for chafing protection and associated size restrictions. Consider clear PVC nylon reinforced fresh water hose that is seized into place.
3	Dock line 'eye' usually secured on board. Ensure adequate clearances around, under and/or through cleats.
4	Utilize UV protected snubbers where shock absorption is important.
5	Nylon dock lines are suitable for anchor rode. Higher breaking strength but less stretch and more susceptibility to chafing than 3-strand nylon. Dacron, Kevlar, Vectran and other 'low-stretch' materials should be avoided as rode or dock lines.
6	Dock line length approximately 2/3 boat length for bow/stern; full boat length for forward/aft spring lines; and, 1/2 boat length for breast lines. More for high tidal ranges.
7	Utilize SS thimbles and proper shackles for semi-permanent moorings and docks.
8	Use a proper belaying knot for making dock lines fast to cleats. Flemish unused dock lines for safety, even drying and a 'Bristol' look.
9	Fender boards are useful when cruising, especially when using Government wharves. Avoid getting dock lines pinched between fenders or fender boards and wharves.