



Working With Dyneema

A roll of 0.6mm Dyneema line comes in the box with your brand new boat.



Dyneema

Dyneema is a type of thermoplastic polyethylene developed by Royal DSM of The Netherlands. Honeywell developed a product identical in chemical structure, which is sold under the brand name Spectra.

These materials have a strength to weight ratio around eight times that of high strength steel. When used in the manufacture of ropes and cordage, they result in products that exhibit low stretch, high strength, and low weight. Our 0.6mm Dyneema has a breaking strength of 70kgm – much higher than the maximum rigging loads on DF boats, which are typically less than 1.5kg.

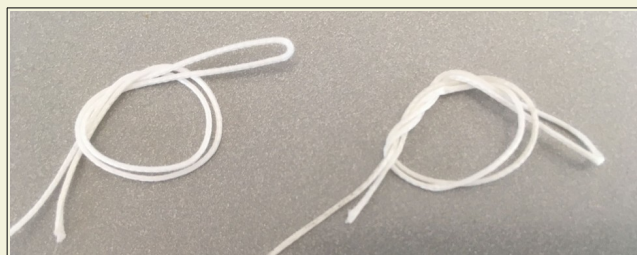
Non-slip knots

Dyneema and Spectra are “self lubricating” and knots will often slip under load where they would hold firm in other types of line.

The secret to making a non-slip knot is to apply a small dab of thin CA glue (Cyanoacrylate – same as super glue) to ensure the knot doesn't unravel during use. CA glue is available in three viscosities: thin, medium, and thick. Thin is best on knots as it readily soaks in. Make sure the knot isn't touching anything while the glue cures, or it will be stuck there for good.

Loops

The easiest loop to tie is the overhand loop knot.



Overhand (left) and Double Overhand (right) loops

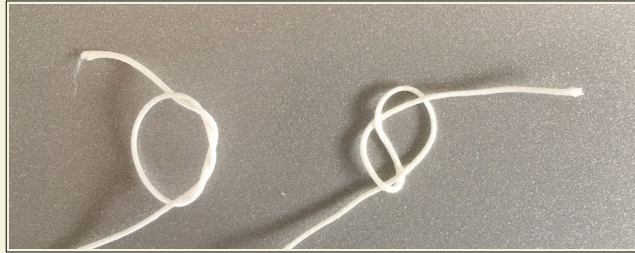
Double the end of the line and tie an overhand knot with the loop that was formed. Adjust the loop before tightening to make it as small or large as desired.

An alternative is to make the loop using a double

overhand knot. This is also known as the Surgeon's Loop. A dab of CA glue will make both loops very secure.

Stopper knots

Two easily tied stopper knots we can use with bowsies are the double overhand knot and the figure eight knot.



Double Overhand (left) and Figure Eight (right) stopper knots

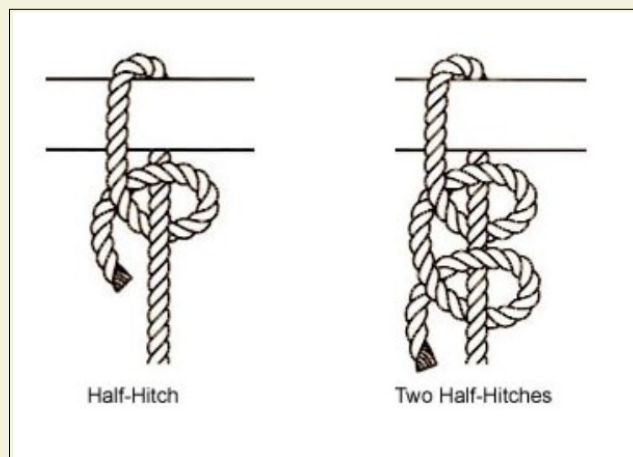
A single overhand knot is not generally bulky enough to reliably hold under pressure. The double overhand is still very easy to tie and is reliable under pressure. It can also be slid along the line to position it before tightening.

The figure eight knot is a little trickier to tie but bulks up nicely to form a reliable stopper knot.

Simple hitches

Hitches can be used where a line has to be tied through an eye such as a bridle deck-eye or a forestay tang.

There are a great variety of hitches, the most common probably being two half hitches. Although having the benefit of simplicity, the knot is not very stable in Dyneema and relies on the CA glue to prevent unravelling.



Two half hitches

The major disadvantage of this type of knot is that once tensioned, it snugs up against the fitting it ties to. When you then apply CA glue to the knot it inevitably finishes up stuck to the boat fitting making replacement of worn rigging a difficult task.

A better approach is to use loops at these points. You can pass the line through the fitting and tie the loop back towards the free end. Shorten up the loop so that the knot is just able to sit off the fitting. Apply CA glue and

hold the knot away from the fitting while it dries.



Tying a loop to a bridle deck-eye

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