

High Strength Soft Shackle

(modified from material found at L-36.com)



How to Make

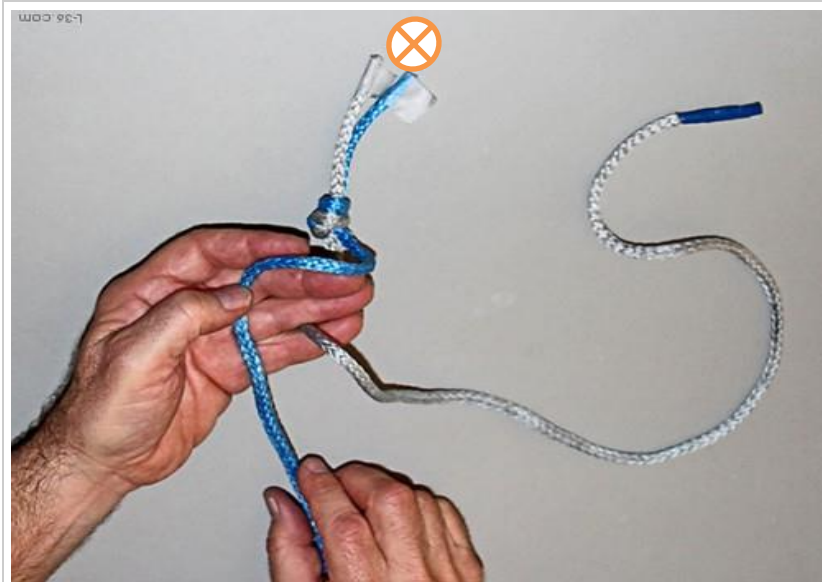
These instructions will be for the simplest form of soft shackle, one without buried sections along the body. use one of the soft shackle calculators to get an idea of how much line to use. Double the line over and pass one line through the other just far enough down to form an eye. [Note: This eye should just be big enough to go round four strand of the line that you are using] Tie the button knot using the two ends and dress to position the knot for the target length shackle. See the [button knot instructions](#).

Tighten the knot by hand and then lock it. I lock mine by placing a strong flat washer in a vice and passing the shackle through it. Then I place a awl in the eye and position a board so that I get maximum leverage pulling the knot as tight as I can. You can also close up the shackle and pull on two ropes, one anchored, and the other on a winch. Then bury each tail as close as possible to the knot extending down the body at least 10 diameters (16 for the tested strength). In other words, if you are using 3/16 line, bury at least 1 7/8 inch of line with 3 inches being the as tested length. Realize that the line you are putting the bury in will shorten so you need to exit your splice down about 25% further down the line than the length of the bury. Before you bury the tails, tighten the button knot as much as you can. Pull with a winch if you can. Cut the buried part at a slight angle and milk it back to that it disappears into the body. After you do the bury, lock stitch the ends so that as the knot tightens more, it will do so evenly.

[Note: when strain is off the eye can be made big enough to go over the button knot by easing one of the strands – the bottom one in the illustration – back through the other. When you have done that, tighten the eye again. Once the strain comes on it will tighten further, until both strands are carrying equal loads.]

How to Tie A Button Knot

(Knot credit to Brion Toss)



This button knot is different than a diamond knot because the tails come out in the same place as the standing part enters the knot. This allows the tails to be buried into the standing parts. That effectively doubles the strength of the knot compared to a diamond knot. Because the diamond knot is the weak link in a soft shackle, this knot will greatly increase the strength of a soft shackle. It will not double it because the eye becomes the weak link but it even increases the strength of the eye by increasing the radius that the eye is grabbing. In this tutorial, the eye of the soft shackle would be where the knot is connecting these two different color lines.

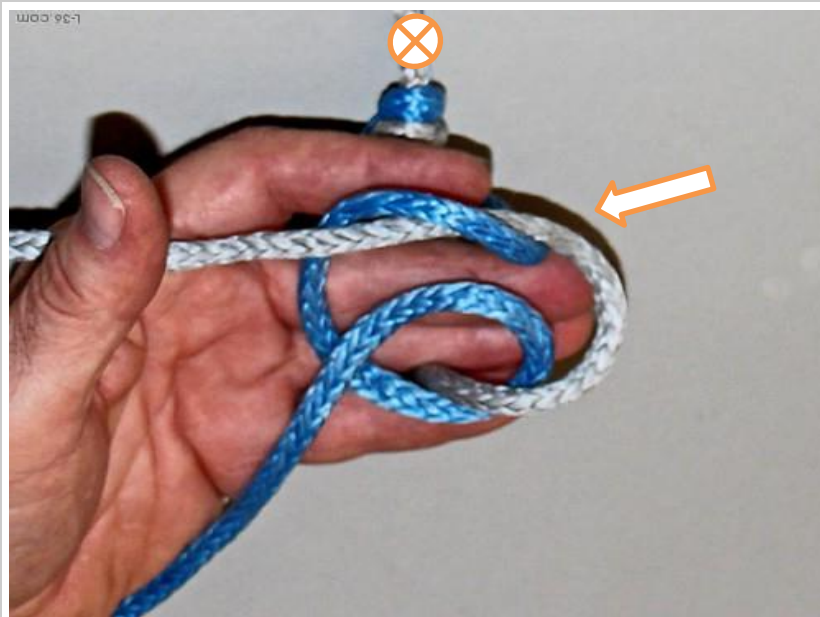


Loop one strand around the other. The loop working end goes above the bight.

[Note: In practice, this knot is made from different ends of the same length of single braid. In following these instructions it may help if you use different colour tape (white and blue are good) to identify the two 'working' strands. Ignore the two short strands – shown so:



These lead to the standing part / eye and have no part to play in the knot.



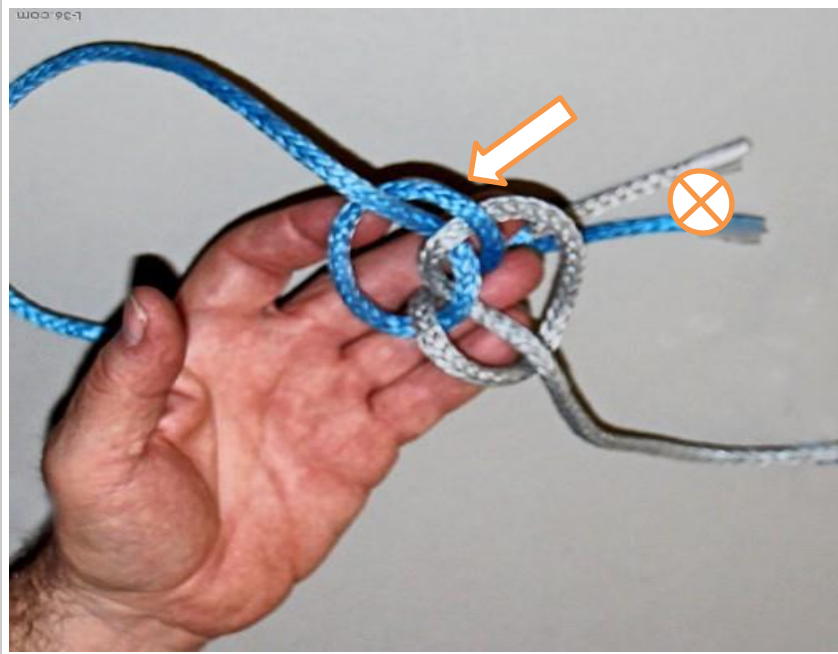
Then take the second strand around the first strand and up. Note that the working end is above the other strand. Observe that there are two loops. There is the first loop you formed and the one you just formed in this step. The first loop should be closer to the end you just brought up and over the first strand (blue). Your goal is to go under the first loop and over the second.



Continue with that strand and put it down through the loop of the first (blue) strand and up over its own bight.



This is what you should have at this point. If it doesn't look like this, arrange it until it does. It is very important to take a bit of time here to make what you have look like the picture. Most important is to get the two large openings that have the working end passing near the part of the loop closest to the standing part. In other words, the loops are counterclockwise and make a gentle loop, not a sharp bend. It might help to put one finger through each of these larger openings as you are going to put the tails up through them and keeping your finger there will maintain where the tails should go.



There are two large openings in the working part of this knot. Take one end and tuck it up through the opposite one of these large openings. Notice that the tail goes under two strands and up through the opening. If you put your fingers through the openings, just put the line where your finger is, but up from the bottom and out the top of the openings.

[Note: The arrow shows the direction of tuck and identifies the 'two strands' Here it helps to tuck both strands of the standing part between the second and third fingers and behind the hand.]



Continue pulling it through the opening. Next we are going to put the other tail under two strands and up through the opening where my little finger is in this picture.



Take the other tail and thread it up through the other similar but opposite opening. You are taking the tail and passing it under the two loops and up through the opening that they create. If you did put your fingers through these openings two steps back, pass the line in the direction from your knuckle to your fingernail.

[Notea: (i) As shown below, the second (blue) tail is led *behind* the first (white) one before being tucked up through the right hand opening;

(ii) The blue arrow shows the direction of tuck and identifies the 'two strands'. One of these is in the loop formed by the first tuck.]



Pull it through and check that it looks like this. This is another point where you should take a bit of time and arrange your lines to look like this picture. You need to identify the two strands in the center that have the red arrows on them. These need to be pulled apart to open up the center of the knot in preparation for the final tucks.



Open up the center, where they the two strands crossed each other by pulling those crossing strands apart. You can see my fingers coming up through the center opening. We are going to take the tail in my right hand and put it down the opening that my finger from my left hand is occupying.



Pull that tail down the opposite opening. I didn't do it that way in the picture, but it might help to put the first strand down the opening you free up with the hand you will use to do the tuck. That will allow your other hand to keep marking the place where the second tuck will go. When you do the tucks, cross the lines from the standing part.

{Note: for the first tuck the standing part should be as shown; for the second, bring the standing part down and towards you.}



Pull it all the way through.



Now take the other tail and thread it down through the other opening.



The knot is now finished and just needs to be tightened up.

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All four ends of the lines, the two standing ends and the two tails, should all be next to each other coming out the bottom of the knot.

Note: Check that this is so before tightening. If they don't, there is a mistake somewhere!]

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Here is what it looks like from the side. Now dress the knot by milking each strand around and ultimately pulling down on the tails.

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Here is the finished knot from the top



Here it is from one side



And from the other side.



And again from the top.