

SAILMAKERS SPLICE PROCEDURE FOR PHILLYSTRAN® FOUR STRAND ROPES

A splice consists of three main components: the tail, the eye and the body of the splice. The tail is equivalent in length to thirty five times the diameter of the rope being spliced. The eye can be almost any size depending upon the application. If a thimble is used, it is sized by rope diameter. For example, a one-inch diameter rope is fitted with a one-inch thimble, however larger thimbles may be used if required.

Soft eyes can be virtually any size, but a properly proportioned soft eye will be one-half the width of its length. The pin or connection hardware should have a minimum diameter equal to five times the diameter of the rope being used. For example, a one-inch diameter rope would not be connected to any hardware or pins that were not five inches in diameter or larger. NOTE: Failure to follow these minimum eye size parameters may result in a failure occurring at the top of the eye. The body is the section of rope that accepts the tail being tucked into the body producing the splice.



NOTE: For severe eye rope abrasion, additional chafing protection may be required.

PROCEDURE:

1. Unlay the strands of the tail and cut the core out. Tape each end tightly for approximately 1 to 2 inches. This keeps the jacket from being pushed back while splicing.
2. Form the appropriate eye size and tape or bind with a whipping to hold the eye together prior to splicing. Form the eye so that the tail is on the right side of the rope, looking up the rope with the eye positioned at the top of the rope.
3. Tuck the strand of the tail closest to the crotch of the eye under one strand with the lay.
4. Tuck the second strand of the tail under the next strand of the body with the lay.
5. Tuck the third and fourth strand in succession under one strand each, again with the lay.
6. All four strands are now exiting the rope between different strands and in succession.
7. Tuck the first strand spirally around the strand it originally went under, again with the lay.
8. Wrap strands two, three and four in the same manner and in succession. Once all four strands have been wrapped once each, this constitutes one full tuck.
9. Continue wrapping all four strands until there are a minimum of seven full tucks or 28 individual tucks.
10. Cut any remaining tail off about two inches from where the strand exits the splice.
11. Whip the bottom of the splice with polyester or comparable whipping. Prior to whipping, coat the area to be whipped with a flexible adhesive. This helps hold the whipping in place and reduces snagging or tearing of the whipping.

NOTE: The last two tucks may be tapered if desired. Prior to starting the splice, push the braid on each tail back one quarter the length of the unlaidd tails. Cut the outer 18 strands off and pull the braid back down over the strands. Tape the ends down tightly for 1-2 inches and cut off excess braid. Proceed with steps 2 through 11 .

CAUTION: Break Strength: The breaking strength of a rope is the load at which a new rope will break when tested under laboratory conditions. Break strength should not be mistaken for safe working load. **Safe Working Load:** Because of the wide range of rope use, rope condition and the degree of risk of life or property, it is not possible to make a blanket recommendation for safe working load. It is ultimately dependent on the rope user to determine what percentage of break strength is their own safe working load. **Wear:** Ropes wear out with use; the more severe the usage, the greater the wear. It is often not possible to detect wear on a rope by visible signs alone. Therefore, it is recommended that the rope user determine a retirement criteria for ropes in their application. For assistance in developing safe working load and retirement criteria for each application please call or write Phillystran, Inc.

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