

# Fact Sheet

## Splicing (cross lay) Synthetic Wire Rope

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### General

Atlas Ropes (or substitutes like Dura winchline, Caesar, etc.) are nylon, six-strand ropes. They have mono- and multi-filaments in the strands. The mono-filaments give the ropes excellent dimensional stability and abrasion resistance. The stretch of the Nylon in combination with the dimensional stability makes these lines ideal for mooring, especially on a constant-tension winch.



The splicing technique for Atlas and Caesar is very similar to wire rope.

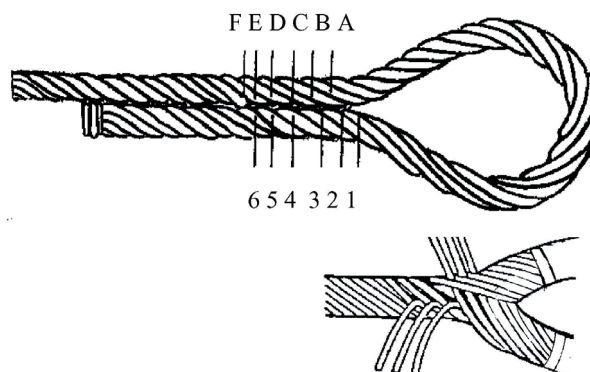
### Preparation

The rope is best spliced on a clean workbench or floor. To make the splice a sharp knife, electric tape, a marker pen, a tape measure and a splicing fid are needed. The use of a protective sleeve over the eye is strongly recommended, e.g. flexible fire hose.

### Splicing

1. Lay the rope on the workbench and put fire hose or other protective material over rope. The length of the free end should be long enough to allow splicing, see also table. Mark the rope with insulating tape.
2. Form the eye, typically 1,8 m.
3. Tape the individual strands with insulating tape and unlaid the strands of the free-end up to the mark. Number the strands as indicated in the figure. The central core should be divided in three parts. They should be spliced together with strands 2, 4 and 6.
4. Strand Nr. 1 under the group of three strands (C, B, A). Strand Nr. 2 (with part of the core) under the group of two strands (C, B). Strand Nr. 3 under strand (C).
5. Strand Nr. 4 (with part of the core) under D, Strand Nr. 5 under strand E, Strand Nr. 6 (with part of the core) under strand F.
6. Pull strongly on strands 1 through 6. It is paramount for a good splice that tensions between strands is equal.

dia. mm	Size mm	length m
40	5	1,5
48	6	1,6
56	7	1,8
64	8	2
72	9	2
80	10	2,25
88	11	2,5
96	12	3



### Tuck 2 through 3; Full tucks with central core

7. The next series of tucks is over one under two strands. If it is possible to clamp the rope than half a turn can be introduced at this moment to open up the rope and facilitate splicing. Take strands 1 through 6 and then tuck it over one under two: Strand 6 over F under A and B, etc...

### Tuck 5 through 8; Full tucks

8. The core is separated from the strands and is no longer spliced back (do not yet cut). If it is possible to clamp the rope than again half a turn can be introduced at this moment to open up the rope and further facilitate splicing
9. Repeat the splicing procedure, over one under two (step 7), three times.

### Tuck 9; Tailoring

10. Remove half the material from all strands and make one more tuck with each strand, over one under two (step 7). This way a gradual taper is obtained.
11. Remove access fibre; free end of each strand and the core should be some 10 cm long.

### Finishing

To prevent snagging of fibres, the foot of the splice should be cover with tape.