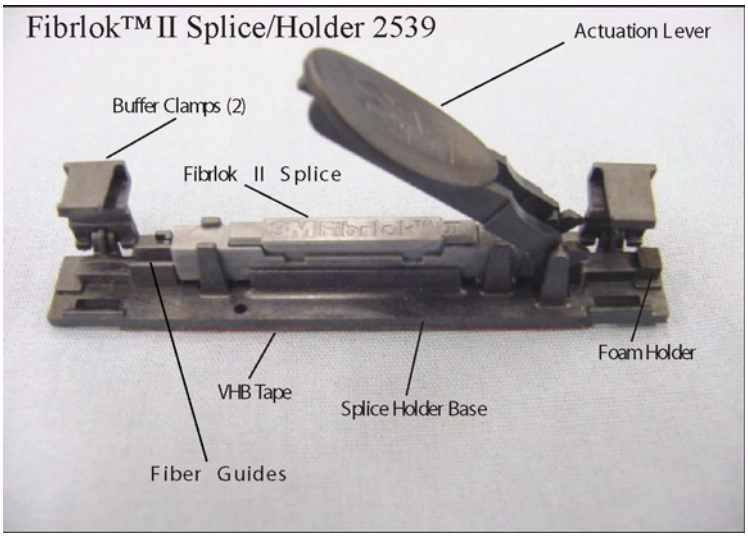
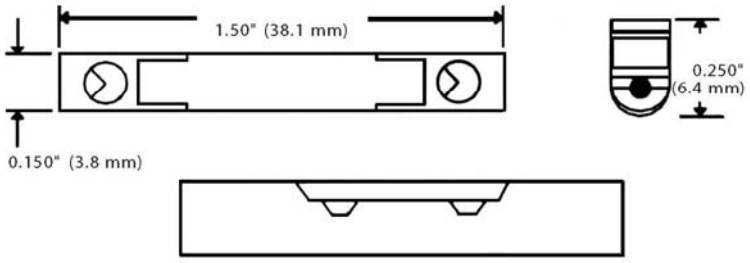
Fibrlok™ II Splice/Holder 2539 Instructions

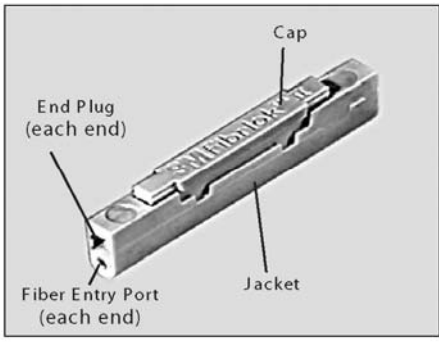
1.0 General

1.1 The 3M™ Fibrlok™ II Splice/ Holder 2539 enables fast, on-site installation of Fiber-to-the Premises (FTTP) connections with a built-in actuation feature. 3M Fibrlok II Universal Optical Splices provide permanent mechanical splices using either single-mode or multimode 125µm fibers with any combination of 250µm and 900µm coating diameters.



1.2 All 2529 universal optical fiber splices are gray in color and are marked with 3M Fibrlok II logo on the splice cap.





2.0 Safety and Helpful Hints

2.1 Use 99% pure reagent-grade isopropyl alcohol to clean the fibers and other components. When splicing any cable containing grease, ensure that all grease is wiped away and the buffer coating and fiber are thoroughly cleaned with isopropyl alcohol.

Note: Carefully follow safety, health and environmental information on the label or MSDS for isopropyl alcohol. Storage, use and disposal of isopropyl alcohol per your company health, safety and environmental instructions.

! CAUTION

The gel inside the splice may cause minimal eye irritation. Avoid eye contact. Wash hands before eating or smoking. Immediately flush eyes with plenty of water while holding eyelids open. Do not view fiber ends if they are illuminated with a laser.

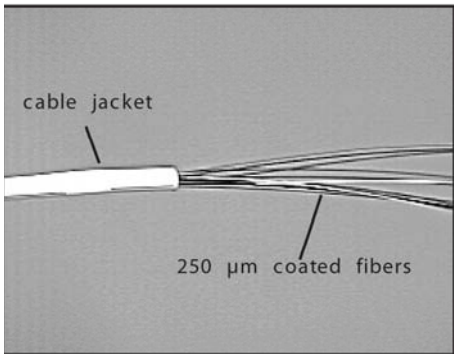
2.2 Carefully follow safety, health and environmental information on 3M Fibrlok II Splice label or Material Safety Data Sheet.

3.0 Tools and Materials required

1) 3M Fibrlok II Splice Holder 2539
2) Buffer Stripper
3) Scissors (Snips)
4) Reagent Grade Isopropyl Alcohol
5) Lint-free Wipes
6) Cleaver

4.0 Splicing Set-Up

4.1 The splicing area should be clean, dry and well lit. A clean, well organized splicing area will improve splice efficiency and minimize the risk of contamination of fibers or splices.



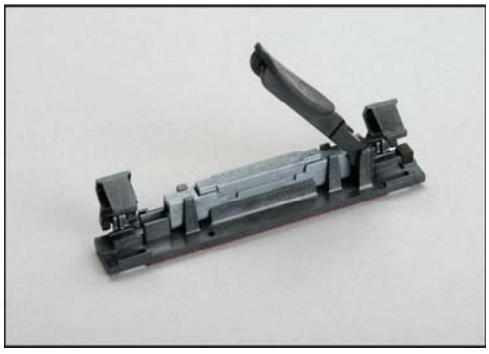
4.2 Open buffer tubes, expose and clean the fibers per your company practice.

4.3 Remove the Fibrlok II Splice/Holder from its protective package.

4.4 **Secure the Fibrlok II Splice/Holder 2539**

Before proceeding, attach the splice/holder to its final location. If there is not enough space to work, then attach the splice/holder after completing the splice. Clean surface of dirt and debris with alcohol and a lint-free cloth. To attach, remove the 3M VHB ™ (Very High Bond) Tape release liner (red) and press the splice/holder base firmly for several seconds onto the surface of its final location.

Note: VHB Tape is not re-positionable.



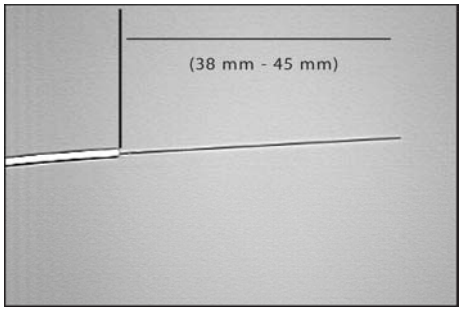
4.5 Lift the buffer clamps at both ends of the splice/holder and lift the actuation lever to the "up" position

5.0 Fiber Preparation

Note: The 3M Fibrlok II Splice/Holder is designed for 900µm tight buffer and 250µm primary coated fiber. To splice 900µm loose tube, semi-tight, or release layered fiber remove the 900µm coating within the last four inches or more from the fiber end to be cleaved.

5.1 Remove the minimum length of the cable outer jacket needed to prepare and splice fibers.

5.2 Strip 1.5 to 1.75 inches (38mm to 45mm) of plastic coating from the fiber using a clean mechanical stripper.



5.3 Clean the bare glass by pulling the fiber through an alcohol soaked lint-free wipe.

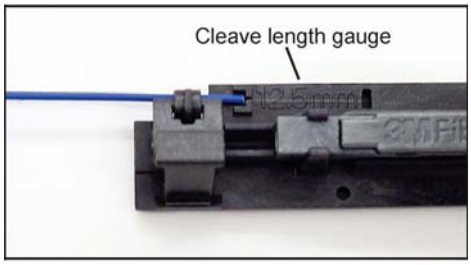
Note: Do not wipe the fibers more than two times, and limit the time that the bare fiber is exposed to the atmosphere.

5.3 Cleave the fiber to 12.5mm +/- 0.5mm (0.49+/0.02 inches) for both 250µm and 900µm tight buffer coated fibers.

Note: Do not clean fibers again after they have been cleaved or allow cleaved ends to contact tools.

Note: Cleavers must be in good operating condition and used per the manufacturer's instructions. They should provide consistent cleave-to-coating lengths within +/- 0.5mm. Acceptable cleavers will produce cleaved ends within 0.5° of perpendicular (typical always <1 °), free from major defects.

5.5 Cleave lengths can be confirmed on the 12.5mm length gauge. Cleave should be within the window.



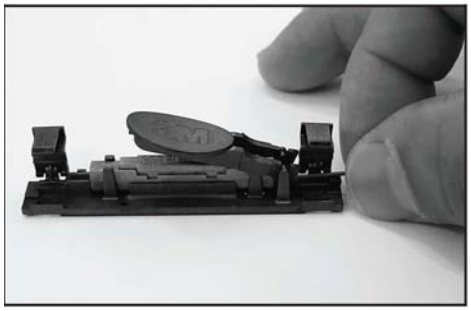
6.0 3M Fibrlok II Splice/Holder Pigtail Assembly 2539 SC/APC and 2539 SC/UPC

6.1 Cut off rubber band, position actuation lever over splice, and lift both buffer clamps to the "up"position.

6.2 Confirm that buffer on pigtail is fully inserted inside splice and follow steps 7.2 through 7.9.

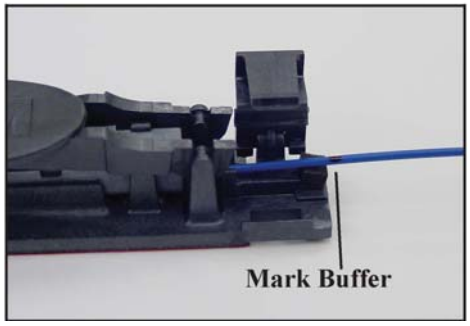
7.0 Splice/Holder Assembly 2539

Note: Always insert the fiber first on the right (actuation lever side) of the splice/holder.



7.1 Holding the fiber approximately ½ inch (13mm) from the bare glass, insert cleaved fiber into the guide on the right (actuation lever side) of the splice/holder until it stops inside the Fibrlok II splice.

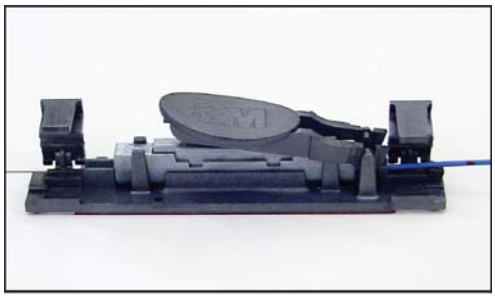
Note: Push fiber straight into the fiber alignment guide, not at an angle. Bare glass should not be visible outside of the splice. If bare glass is visible, pull back slightly on the fiber and continue insertion until resistance is met. Do not fully remove fibers from splice after initial insertion.



7.2 Carefully mark the buffer at the right edge of the base.

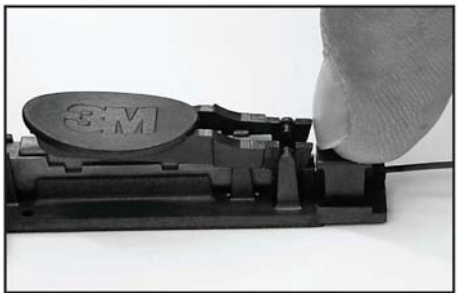
7.3 Prepare second fiber (strip, clean and cleave) as described in section 5.

7.4 Holding the fiber approximately ½ inch (13mm) from the bare glass, insert second fiber into the guide on the left side (opposite actuation lever) of the splice/holder until it stops inside the Fibrlok II splice.



7.5 While sliding the second fiber into the splice, the mark on the first fiber should move outwards 1/8 inch (3mm) showing the fiber ends are in contact. If this is not observed, one or both fibers has a bad/short cleave. Remove one fiber and re-strip, clean, re-cleave and insert back into the splice. If contact is still not correct, repeat procedure for second fiber.

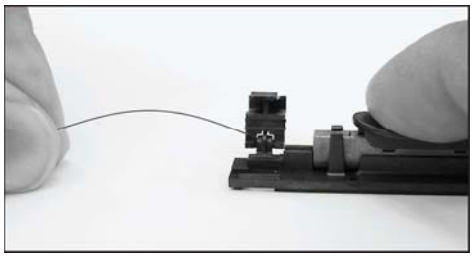
Note: To prevent contamination, never fully remove and re-insert a cleaved end back into a splice without first re-stripping and re-cleaving.



7.6 Center both fiber cleaves by repositioning the mark on the first fiber half way back to its original position.

7.7 Once the fibers are centered, fully close the right buffer clamp. ***You will hear an audible snap.***

7.8 Grasp the left fiber about 2 inches from the holder and push the fiber in until it bows about 1/8 to 1/4 inch (3mm to 6mm). Push down on the actuation lever until the Fibrlok II Splice is actuated. An audible click can be heard and you should feel the splice cap snap down into place when completely closed. The cap should be level with the Fibrlok splice top surface.



7.9 Release the bow in the fiber and fully close the left buffer clamp. Again, you will hear an audible snap.

8.0 Fiber Repositioning

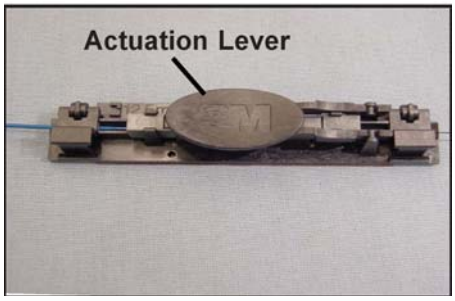
8.1 If high loss is observed after the splice has been actuated, it is possible that the fiber ends are separated. In this case, lift the splice cap and reposition the fiber ends, as instructed below.

8.2 While the splice is still in the holder assembly, lift the actuation lever and insert the cap removal tool over the splice cap. Grasp both sides of the splice holder base and lift the cap up and off the splice while gently rocking lengthwise. Replace the cap parallel to the top, but raised about 1mm (0.04 inch) as it snaps into place.

8.3 Carefully reposition fiber. Refer to section 7.0 for proper fiber centering and splice actuation.

8.4 Place splice cap back on the Fibrlok splice and push down the actuation lever until cap has been fully actuated.

8.5 If after two attempts, an acceptable splice loss is not obtained, remove fibers and replace the Fibrlok splice with a new splice. Redo fiber preparation (section 5) by re-stripping, cleaning, and cleaving both fibers. Then repeat steps in section 7.



8.6 Upon completion, the actuation lever can be removed and discarded if desired.

3M
Communication Markets Division
3M Telecommunications
6801 River Place Blvd.
Austin, TX 78726-9000
800.426.8688
Fax 800.626.0329
www.3MTelecommunications.com

Litho in USA

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