SUMITOMO ELECTRIC LIGHTWAVE

SUMITOMO RECOMMENDED PROCEDURE

SRP SP-F04-045

FutureFLEX® AIR-BLOWN FIBER SOLUTIONS

FP48PVS & FP72PVS FIBER BUNDLE STRIPPING PROCEDURE

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1.0 General

1.1 This procedure describes the standard techniques for stripping the jacketing materials from a 48 or 72 air blown fiber bundle whenever the ribbon fibers are to be spliced or terminated.

1.2 The outer jacket is a lightweight, aerodynamically designed Polyvinylidene Fluoride (PVDF) material. The 48 & 72 fiber bundles have 3.1mm and ~3.7 mm outer jacket respectively. This requires a slightly different fiber bundle stripping procedure than polyethylene foam referenced in SRP SP-F04-006.

1.3 FutureFLEX fiber bundles do not have tensile strength members (Kevlar) nor contain any waterproofing gels / materials typically found in many conventional fiber optic cables.

1.4 All PVDF outer jacket fiber bundles contain a ripcord for ease in stripping to the bare fiber ribbons.

2.0 Safety Precautions

2.1 When stripping jacketing materials from fiber bundles, use care and properly dispose of any individual fiber ends that are removed. The fiber ends are easily misplaced and can pierce the skin resulting in splinters that are not easily removed. Keep in mind that the 72 Fiber Bundle consists of 6-12 fiber pliable Ribbons.

2.1.1 See SRP SP-F04-046 for how to differentiate between the individual 12 fiber ribbons in the 48 or 72 fiber bundle. Further identification of individual fibers in each ribbon is based on the standard fiber color code from blue to aqua.

2.2 Exercise caution when using tools used to strip the jackets from fiber bundles. They may have sharp blades.

2.3 The use of safety glasses is strongly recommended during this procedure.

2.4 Make sure you have a clean work area when working with bare fibers.

3.0 Reference Documents

3.1 Sumitomo Recommended Procedure,
Field Termination Procedure for FP72PVS Fiber Bundles With FT72FBK-12SU breakout Kit.
SRP SP-F04-046

3.2 Sumitomo Recommended Procedure,
FB72PVS Fiber Bundle Procedure for Single Fiber Termination Using a FB72FBK 900µm Breakout Kit.
SRP SP-F04-047

4.0 Equipment / Tools Required

The following equipment and tools are required to complete this procedure:

4.1 Felt tip pen / marker

4.2 Tape Measure

4.3 10-20 AWG Wire Strippers

4.4 Soft, clean cloth

4.5 Needle Nose Pliers

4.6 99% Isopropyl Alcohol

4.7 Safety Glasses

Note: *This SRP will describe the detailed stripping procedures for Pliable Freeform 48 & 72 fiber ribbon bundles. This does not include PEF jacketed fiber bundles.*

5.0 Stripping 48 & 72 Fiber Bundle

5.1 Mark Outer Jacket.
Generally, at least 6” - 8” of additional fiber bundle strip length beyond the actual fiber required length should be provided. This is in case any optical fibers are damaged near the end of the bundle during stripping procedures. This point should be determined based on the actual fiber splicing or termination hardware used. (Also Consult splicing or termination hardware manufacturer’s instructions for recommended strip length.)

5.2 Use a felt tip pen to mark fiber bundle outer foam jacket at appropriate location for jacket removal. **See Fig. 1.**

Note: *Field Termination 48 & 72 Fiber Breakout Kits (FT48FBK / FT72FBK) Fiber bundle strip length should be between 42”-44”.*

Figure 1
Marking Fiber Bundle Outer Foam Jacket
Between 42” - 44” for 72 Fiber Bundles

5.3 Stripping Outer Jacket.
Hold the fiber bundle 4” – 5” from the end and point it towards yourself. Using the 10 AWG slot (largest slot) on the wire strippers, apply slight pressure around the jacket and strip the jacket with one quick pull towards yourself. This should strip the jacket enough to expose the ribbons underneath. From this point, the ripcord must be found to strip to the designated mark more easily.

5.4 Finding the Ripcord.
Peel the jacket back enough to expose 2”-3” of the ribbons. Fold the end of the ribbons over to form a loop. **See Fig 2.**

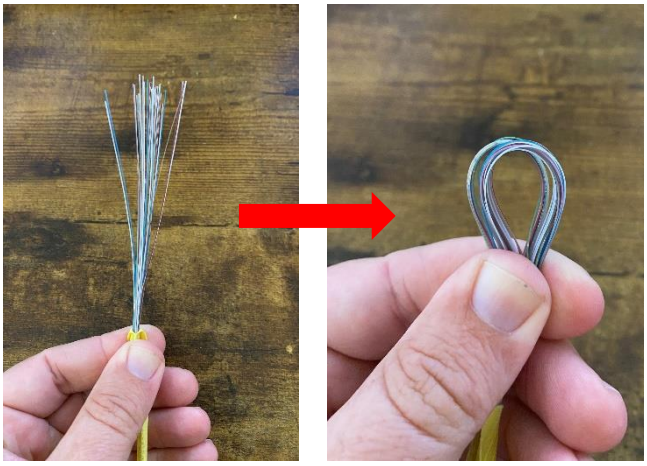

Figure 2
Folding the Ribbons

Pinch the ribbons together and hold for a few seconds. Release the ribbons and all the fibers will spring back to a straight position, while the ripcord will retain the bend from pinching. **See Fig 3 & 4.**

Note: *Depending on the applied pressure, the strands may break. Be sure to discard them safely.*

Figure 3
Pinching the Ribbons

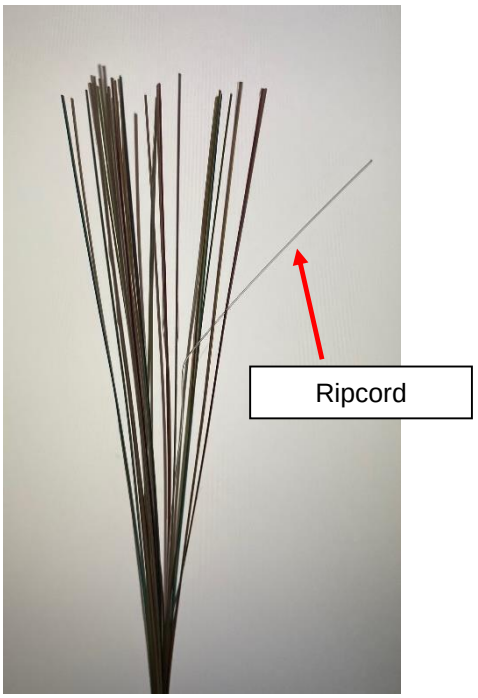

Figure 4
Ripcord retaining bend

5.5 Before pulling the ripcord, make sure that it is positioned on the outside of the ribbons making sure it does NOT cross over any fibers. Carefully pull the ripcord in case it begins to bind. If it does, make sure to reposition it back to the outside of the ribbons and carefully continue to strip it back to the mark.

Note: *If the ripcord is not on the outside, it will damage the ribbons while pulling.*

5.6 After breaking into the jacket, pinch the ribbons with your fingers or clean cloth and carefully peel back the jacket to the marked location. Keep the ribbons straight, while pulling the jacket away. Remove any excess jacket and ripcord until only the ribbons remain. **See Fig 5.**

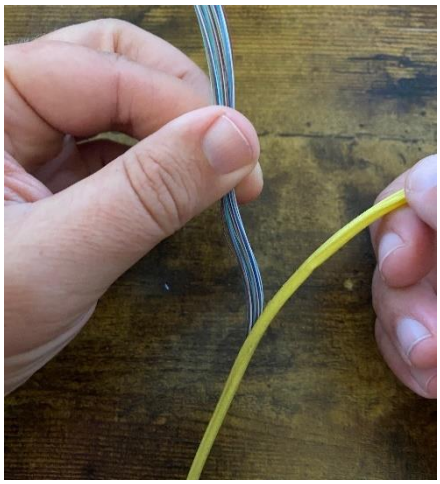

Figure 5
Peel Jacket Back to Marked Point

6.0 Prepare Ribbons for Splicing

6.1 Once all ribbons are exposed to the mark, it is now time to prepare for splicing.

6.2 Best practice procedures recommend not over-handling the ribbons until after you have identified each of the 12f groups

6.3 Grab one of the ribbons 6”-8” from the end and run your fingers along the length to the end to flatten out the ribbon. **See Fig. 6**

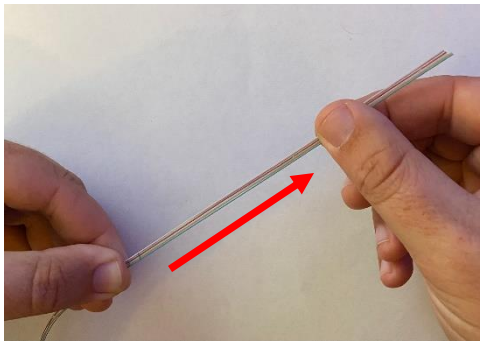

Figure 6
Flattening ribbon for holder

Note: *The use of 99% Isopropyl Alcohol will help keep the ribbon fibers aligned to place in the holder correctly. Saturate fingers, then swipe along ribbon.*

6.4 Place ribbon into holder. It is now ready to clean, cleave, and splice.