



A Furukawa Company

## AccuFlex™+ Cable Prep and Ribbon Matrix Removal

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### 1. General

1.1 The following procedure describes sheath removal and ribbon matrix removal for OFS AccuFlex™+ cable.

1.2 *AccuFlex+* cable is a central tube plenum rated cable and is ideal for use in a variety of installation environments including data centers, central offices, and CATV head ends. *AccuFlex+* cable contains AccuRibbon® 12-fiber optical ribbons and is available with 12 to 144 fibers.

### 2. Precautions

2.1 *AccuFlex+* cable is designed specifically for indoor applications and should only be used in low-tension applications. Care must be exercised during installation to ensure that the cable tension does not exceed the maximum rated cable load (MRCL).

2.2 Cable tensile load ratings are specified for both static and dynamic conditions. The dynamic condition represents a cable during installation that may be subjected to the MRCL. The static condition represents an installed cable that may be subjected to long-term residual load. Cable tensile load ratings for both static and dynamic conditions are given in Table 1.

2.3 Cable minimum bend diameters<sup>1</sup> are also defined for static and dynamic conditions and are expressed as a multiple of the cable outside diameter (OD). The static condition represents an installed cable that may be subjected to long-term residual load. The dynamic condition represents a cable during installation

<sup>1</sup> Some cable manufacturers specify minimum bend radius rather than minimum bend diameter. For comparative purposes, the minimum bend radii for *AccuFlex™+* cable are 10 × OD and 20 × OD, respectively, for static and dynamic conditions.

that may be subjected to the MRCL. For *AccuFlex+* cable, the minimum bend diameter under static conditions is 20 × OD and the minimum bend diameter under dynamic conditions is 40 × OD. Minimum recommended bend diameters for *AccuFlex+* cable are summarized in Table 1.

**2.4** Minimum bend diameters are also specified for cable storage coils. The minimum storage coil diameter for *AccuFlex+* cable is 40 × OD. See Table 1 for specific dimensions.

**Table 1 - Maximum Cable Loads and Minimum Bend Diameters for *AccuFlex+* Cable**

Fiber Count	Cable OD	Maximum Rated Cable Load	Maximum Long Term Load	Minimum Bend Diameters		
				Dynamic Condition	Static Condition	Storage Coils
Plenum 12 – 72	0.37 in. (9.4 mm)	300 lb (1335 N)	90 lb (400 N)	15 in. (38 cm)	7.5 in. (19 cm)	15 in. (38 cm)

### 3. Required Tools

The following tools and materials are recommended for use in the sheath removal procedure.

- Cable sheath knife (alternate method)
- JOKARI<sup>2</sup> cable knife
- Scissors
- Diagonal cutters
- Pliers
- Tape measure
- Saint-Gobain Performance Plastics CHR<sup>3</sup> M-717 tape (or equivalent)
- IDEAL<sup>4</sup> coax cable stripper, #45-165
- Scotch-Brite<sup>5</sup> Blue Pad
- Gloves
- Safety glasses

**Caution:** Safety glasses and gloves should always be worn when opening and/or removing the cable sheath.

<sup>2</sup> JOKARI is a registered trademark of JOKARI-Krampe GmbH, Ascheberg-Herbern, Germany.

<sup>3</sup> CHR is a registered trademark of Saint-Gobain Performance Plastics Corporation, Hoosick Falls, NY

<sup>4</sup> IDEAL is a registered trademark of IDEAL Industries, Sycamore, IL

<sup>5</sup> Scotch-Brite is a trademark of 3M Corporation, St. Paul, MN

#### 4. Sheath Removal

4.1 Mark the cable jacket at the required breakout length. Ring cut the cable jacket at the mark and flex the cable to snap the jacket (Figure 1).

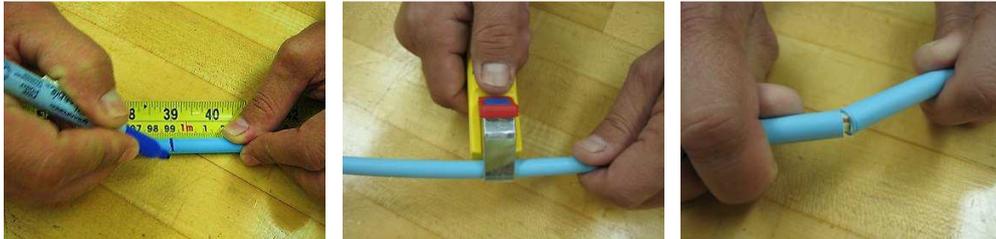


Figure 1 – Ring cut and separate the cable jacket.

4.2 Alternatively, the cable can be ring cut with a razor knife. **Use extreme caution when ring cutting with a razor knife** (Figure 2).

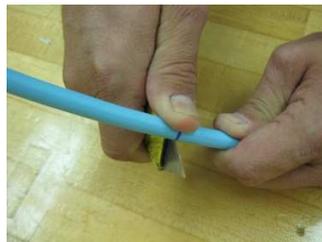


Figure 2 – Ring cut using a razor knife.

4.3 Ring cut the cable jacket 4 inches from the cable end. Flex the cable to snap the jacket. Pull the two ripcords through the ring cut with a dental pick or similar tool and pull out the side of the cable. (Figure 3).

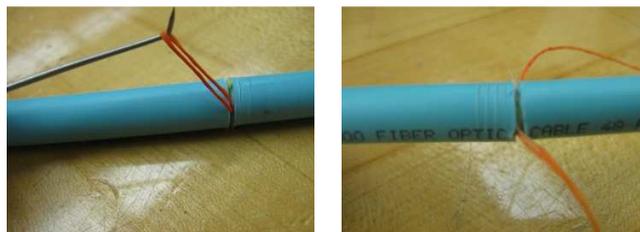
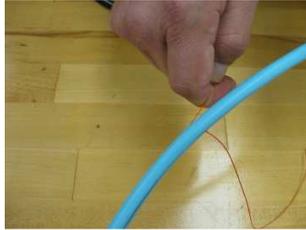


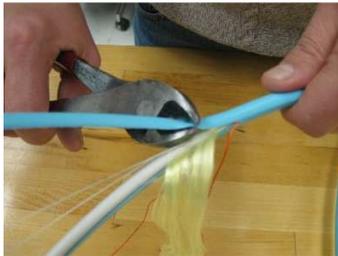
Figure 3 – Expose the ripcord.

4.4 Pull the rip cords through the cable jacket using a pair of needle nose pliers (Figure 4).



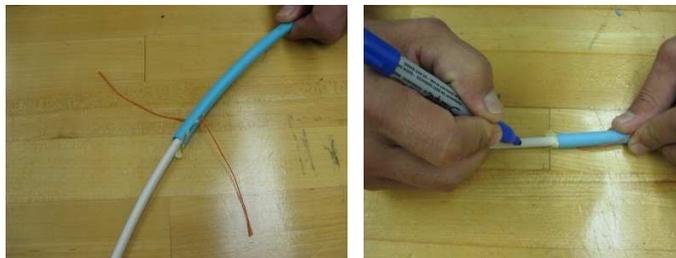
**Figure 4 – Pull the ripcords through the cable jacket.**

**4.5** Fold the outer jacket back and remove by cutting away the two pieces. (Figure 5).



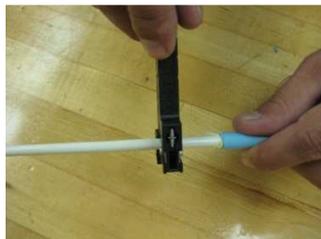
**Figure 5 – Remove the outer jacket.**

**4.6** Where applicable, cut away the aramid yarns and strength members. Mark the central tube at the location where it will be cut and removed (Figure 6).



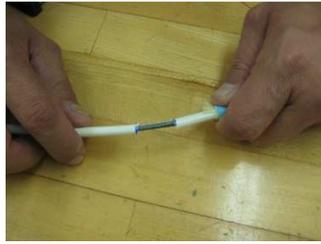
**Figure 6 – Mark the central tube at the appropriate length to be removed.**

**4.7** Score the central tube with the Ideal coax cable stripper. Set the depth of the blade with trial pieces until the depth is suitable to score the tube without nicking the fiber (Figure 7).



**Figure 7 – Score the central tube.**

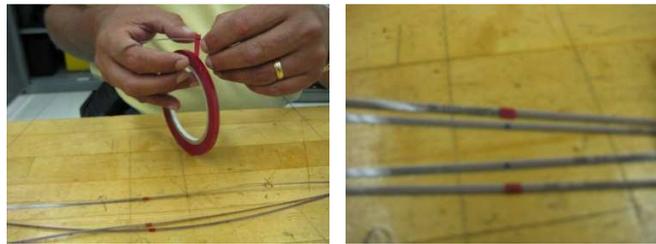
- 4.8** Flex and snap the central tube at the score mark, then pull and remove the core tube to expose the *AccuRibbon* fibers (Figure 8).



**Figure 8 – Remove the central tube.**

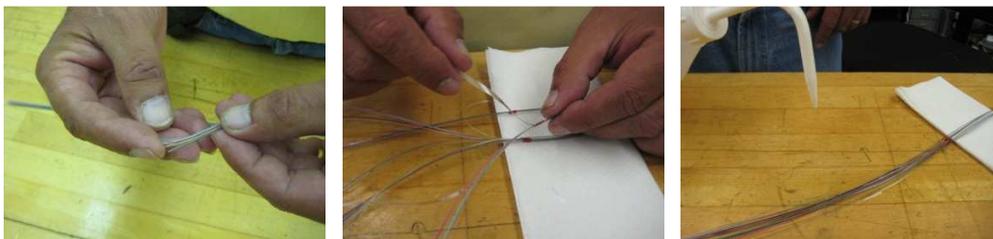
## **5. *AccuRibbon* Matrix Removal**

- 5.1** Mark the fiber ribbons to indicate the length of matrix material that will be removed. Place a piece of CHR M-717 red tape at the mark to prevent the ribbons from splitting beyond the required length (Figure 9).



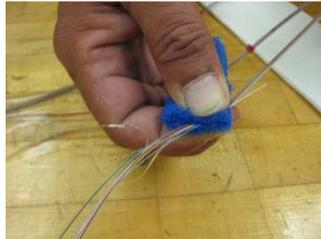
**Figure 9 – Mark and tape the ribbons at required breakout length.**

- 5.2** Flare the end of the fiber ribbons to begin breaking down the matrix and peel each individual fiber back to the red tape. Remove the loose matrix as necessary while peeling the fibers. Place the ribbons on a flat surface and place the taped end on a towel to prevent the alcohol from wicking past the tape. Apply isopropyl alcohol on the exposed fibers to soften any remaining matrix material (Figure 10).



**Figure 10 – Remove the matrix material from the *AccuRibbon* fibers.**

- 5.3** Place the fibers between a Scotch-Brite blue pad and slide the pad down the fibers to remove any excess matrix. Sometimes the matrix may remain on the edge fibers after peeling and soaking. If this occurs the blue pad can be utilized again to remove any remaining matrix material (Figure 11).



**Figure 11 – Remove the excess matrix with blue pad.**

- 5.4** Dry the fibers and check for remaining matrix. Fibers should be clean and ready for the next process.

***For additional information please contact your sales representative. You can also visit our website at [www.ofsoptics.com](http://www.ofsoptics.com) or call 1-888-FIBERHELP (1-888-342-3743) from inside the USA or 1-770-798-5555 from outside the USA.***

***AccuRibbon is registered trademark and AccuFlex is a trademark of OFS FITEL, LLC.***

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