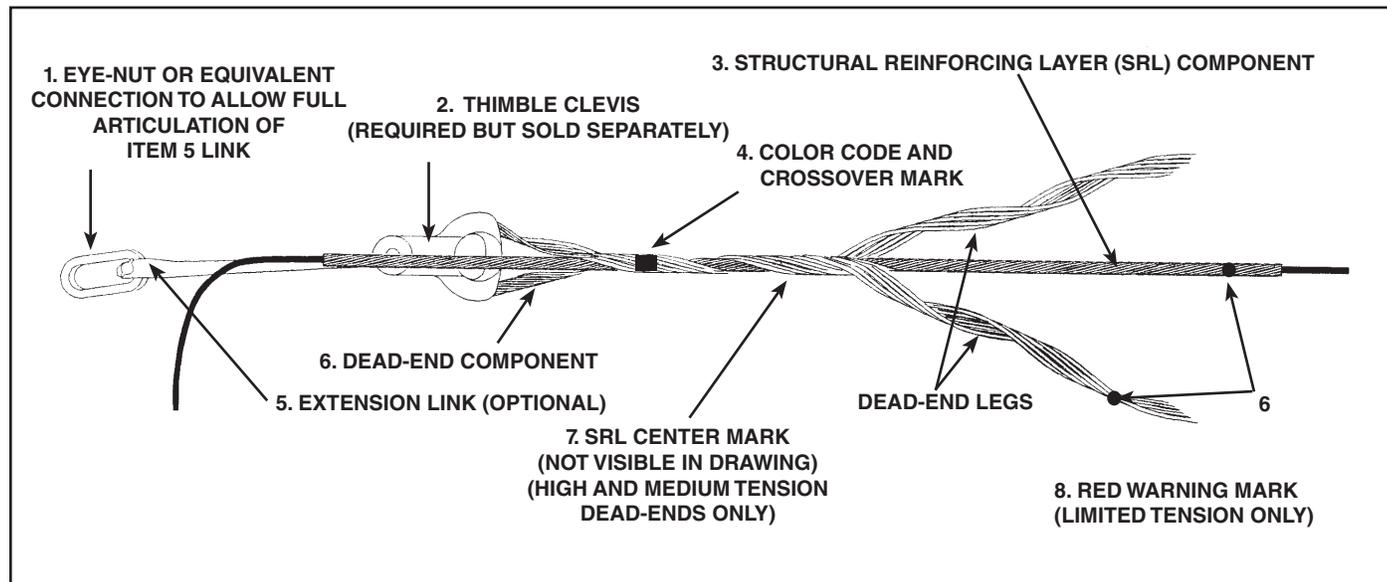




FIBERLIGN® Dielectric Dead-end

High, Medium and Limited Tension Dielectric Dead-ends

Be sure to read and completely understand this procedure before applying product. Be sure to select the proper PREFORMED product before application.



FIBERLIGN DIELECTRIC DEAD-END AND ASSOCIATED HARDWARE

NOMENCLATURE:

1. Eye-Nut
2. Thimble Clevis (Required, but not included. Sold separately)
3. Structural Reinforcing Layer (SRL) Component (included)
4. Color Code and Crossover Marks
5. Extension Link (optional)
6. Dead-end Component (included)
7. SRL Center mark (High & Medium Tension Dead-ends only)
8. Red Warning Mark (Limited Tension Dead-ends only)

CAUTION:

The extension link #5 requires adequate articulation at both ends of the attachment. Reduced articulation can introduce non-axial loading which may result in premature breakage. Eye-nuts or chain links may be used to connect the link to the structure.

DESCRIPTION

FIBERLIGN Dielectric Dead-ends terminate self-supporting all dielectric optical cable, keeping the cable under required tension while preserving the desired sag.

FIBERLIGN Dielectric Dead-ends are specially designed to provide the required holding strength while minimizing any compressive stresses that may be transferred to the fiber optic elements.

INSTALLATION ISSUES

Length: FIBERLIGN Dielectric Dead-ends are manufactured with a specific number and length of rods (wires) specified by PLP in order to provide necessary holding strength.

CAUTION: Alterations to the number or length of the rods may prevent the product from functioning properly. Do not alter the rods in any way.

Specific Dead-end and Cable Design:

FIBERLIGN Dielectric Dead-ends are available in three versions: Custom-designed HIGH TENSION Dielectric Dead-ends, MEDIUM TENSION Dielectric Dead-ends and standard design LIMITED TENSION Dead-ends.

INSTALLATION ISSUES continued

HIGH & MEDIUM TENSION Dielectric Dead-ends are intended for use on applications with relatively high tensions (greater than approximately 1,000# stringing tension and 2,500# working load), long spans (depending on actual tensions), high operating temperatures, special cable jackets, and/or unusual operating conditions. They are usually custom designed for a specific application and require an engineering recommendation from PLP. Holding capabilities may vary according to the specific cable and operating conditions.

CAUTION: Be sure that the HIGH or MEDIUM TENSION Dielectric Dead-ends you are using are designed for the cable and actual installation in which they will be installed. Cables with the same outside diameter may require different designs. Contact PLP for specifics.

LIMITED TENSION Dielectric Dead-ends are intended for use on applications with relatively low tensions (1,000# maximum stringing tension and 2,500# maximum working load), short spans (depending on actual tensions), and “normal” operating conditions and cable jackets. They have a “standard” design that is not cable specific and consequently will provide varying holding capabilities according to the specific cable and operating conditions.

CAUTION: Be sure that the tension and holding requirements of the application do not exceed the capabilities of the LIMITED TENSION Dielectric Dead-end. Consult PLP for specifics.

Structural Reinforcing Layer (SRL):

This layer of helically formed rods transfers the load between the cable jacket and the dead-end component. The SRL is specially designed to transfer these axial tensile forces without distorting the cable.

Associated Hardware:

There are two additional components associated with the FIBERLIGN Dielectric Dead-end application.

Thimble Clevis: A clevis of proper size and strength is required in order to support the dead-end's loop and connect the dead-end to the structure or other fittings.

- HIGH TENSION Dielectric Dead-ends require a thimble clevis with a minimum seat diameter of 2.25". Available from PLP is the ATC-20M which is rated at 20,000# and has a seat diameter of approximately 3".

- MEDIUM & LIMITED TENSION Dielectric Dead-ends require a thimble clevis with a minimum seat diameter of 1.6". PLP offers two thimble clevises with 2.25" seat diameter including the TC-5F standard galvanized steel version rated for 24k lb. and the TC-5A aluminum version rated for 12.5k lb.

Extension Link: The optional extension link positions the dead-end at the structure to allow an acceptable cable bending radius. A 14" link with 5/8" eye nut Catalog No. 71002366 is available from PLP.

Re-application: FIBERLIGN Dielectric Dead-ends may be used only once as a pulling-in grip, removed then reapplied only once more for permanent installation, for a total of two applications. DO NOT re-use after initial, permanent installation is completed.

CAUTION: Most fiber failures occur during dead-ending. Therefore, it is important to understand the above installation issues and the following application procedures.

STRUCTURAL REINFORCING LAYER APPLICATION

STEP 1 Before applying the structural reinforcing layer, loop the FIBERLIGN Dielectric Dead-end component through the thimble clevis and position it parallel to the cable.



STEP 2 Mark the cable at the color-coded crossover mark on the dead-end. This will be the reference mark for positioning the structural reinforcing layer (SRL) subsets on the cable.

Align the color code mark located near the structure of the SRL subset with the reference mark you just made on the cable.

- HIGH & MEDIUM TENSION Dielectric Dead-end SRL rods are best installed starting at the center of the rods due to their long length. Begin at the center mark of the subset and apply them while pulling the rod legs up and away from the cable as you wrap them on as shown below.



CAUTION: If you start to apply the SRL subsets of a HIGH or MEDIUM TENSION Dielectric Dead-end at the crossover mark near the structure, you may have difficulty phasing in the end of the final SRL subsets.

- LIMITED TENSION Dielectric Dead-end SRL rods can be installed starting at the crossover mark due to their short length. It may also be possible to completely install all the subsets one-by-one. However, for ease of installation it is suggested to follow the alternating subset installation steps used for High and Medium Tension Dead-ends.

STEP 3 Wrap the rods of the first subset completely on to the cable and snap the ends into place, although you may leave portions of this subset temporarily unwrapped if convenient as shown below.

Align the center mark of a second subset with the first subset.



STEP 4 Wrap the second subset on the cable for two or three pitch lengths, leaving the ends loose, as shown below.



PLP Tip:

It aids installation if you wrap a subset on the cable into a previously applied subset. Wrapping away from a previously applied subset can increase the gap between subsets and cause application problems at the ends of the unapplied subsets. Wrapping all unapplied subsets at the same time can also help avoid this problem.

STEP 5 Apply remaining subsets as outlined in Steps 3 and 4.



STEP 6 To complete application, wrap unapplied subsets into previously applied subsets or use both hands to wrap subsets simultaneously into position as shown below. First wrap one end, then wrap the other end. To assure a strong reinforcement, make sure that rods are not crossed and that all rods are evenly spaced. **MAKE SURE ALL ROD ENDS ARE IN PLACE.** Do not use tools that can damage the cable jacket.



FIBERLIGN DIELECTRIC DEAD-END APPLICATION

STEP 7 Insert FIBERLIGN® Dielectric Dead-end loop through a proper size and strength Thimble Clevis.

Align the crossover mark of the dead-end with the color code mark (not center mark) of the SRL. Begin application by wrapping the dead-end legs over the SRL starting at the crossover marks as shown below. It may be possible to wrap one leg at a time; however, it may aid installation to wrap both legs simultaneously.



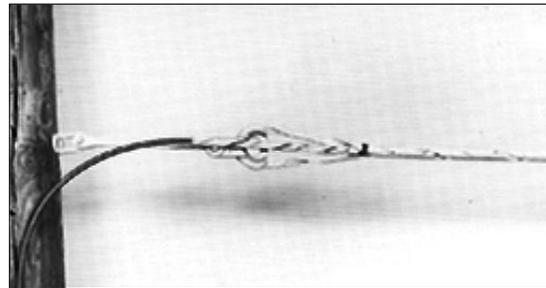
STEP 8 Continue the installation by wrapping the leg(s) around the SRL as shown below. Whether you wrap one leg at a time or both simultaneously, make sure the gap between both legs is evenly spaced.



STEP 9 To ease final installation, do not apply the last two leg pitches. Split the legs as shown below, then apply them completely. Make sure all rod ends are snapped into place.



STEP 10 Finished application.



SAFETY CONSIDERATIONS

This application procedure is not intended to supersede any company construction or safety standards. This procedure is offered only to illustrate safe application for the individual. **FAILURE TO FOLLOW THESE PROCEDURES MAY RESULT IN PERSONAL INJURY OR DEATH.**

Do not modify this product under any circumstances.

This product is intended for use by trained technicians only. **This product should not be used by anyone who is not familiar with, and not trained to use it.**

When working in the area of energized lines, extra care should be taken to prevent accidental electrical contact.

For proper performance and personal safety, be sure to select the proper size PREFORMED™ product before application.

PREFORMED products are precision devices. To insure proper performance, they should be stored in cartons under cover and handled carefully.



PREFORMED LINE PRODUCTS

P.O. Box 91129, Cleveland, Ohio 44101 • 440.461.5200 • www.preformed.com • e-mail: inquiries@preformed.com

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