

Application Report

Alternative Jacket™ Fiber Optic Cable

Damage to aerial cables from squirrels is a challenging issue for system operators. The damage can result in signal leakage and even a service outage. To prevent this damage, system operators have traditionally installed a protective barrier such as squirrel guard around the aerial plant or endured the expense of moving the plant underground.

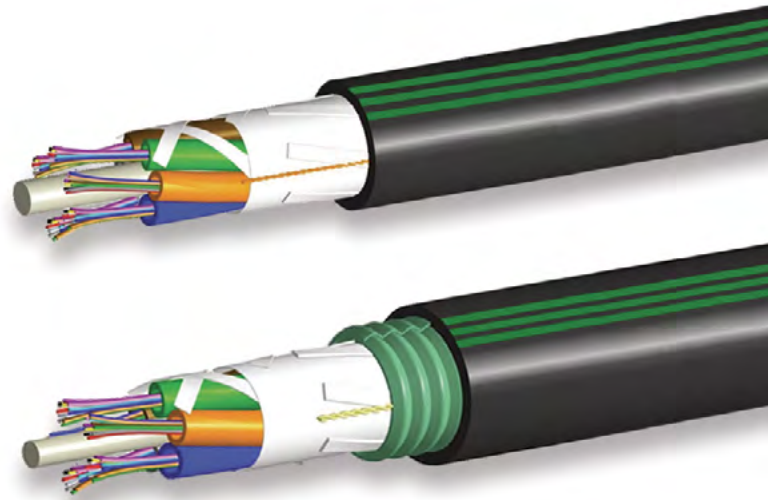
Both repairing the damage and the traditional methods of preventing the damage are costly and consume man hours. To reduce the cost of protection and decrease repairs, CommScope has introduced Alternative Jacket™ (AJ).

Understanding the Issue

Squirrels, like all rodents, have teeth that continue to grow throughout their lives. If the squirrel's teeth grow too long they will effectively create a cage in front of the squirrel's mouth which will prevent it from consuming food. In order for squirrels to keep their teeth short enough to prevent this from occurring, they need to "cut" their teeth back by chewing on material that is strong enough to wear them down but soft enough to not break them.

Cable components like aluminum outer conductors and steel armor meet this need perfectly.

The use of aerial cable to aid in wearing down teeth is a learned behavior. Once this was understood, CommScope developed Alternative Jacket to help squirrels learn a different behavior.



CommScope Alternative Jacket Fiber Optic Cables

What is Alternative Jacket?

CommScope's Alternative Jacket is a patented polymer blend that utilizes food-grade additives to deter squirrels from chewing the jacket. The material is intended to make the act of cutting their teeth back on cable an unpleasant experience through the combination of taste and sensation.

The additives blended into the polymer are temporarily unpleasant but are not harmful to wildlife.

CommScope's Alternative Jacket Fiber Optic Cable is installed using the same process as standard outside plant stranded loose tube fiber optic cable. The use of appropriate construction practices are outlined in the **CommScope Fiber Optics Construction Manual** available in digital format at www.commscope.com.

Reliability of Alternative Jacket

CommScope conducted a seven year, multi-state, multi-location field study. The field study consisted of placing samples of bare coaxial cable, jacketed coaxial cable, jacketed/flooded coaxial cable, and Alternative Jacketed cable at locations known to have severe squirrel chew problems requiring replacement of cables multiple times per year.

The field study clearly demonstrated that squirrels selectively chewed the cables in the following order:

1. Bare coaxial cable
2. Jacketed cables
3. Jacketed/flooded cables
4. Alternative Jacket™

Sample types 1, 2 and 3 were all severely damaged by squirrels. The samples with Alternative Jacket were typically found to have only slight cosmetic damage.

Handling Precautions

Some people may show sensitivity to the additives in AJ resulting in mild skin reaction. CommScope recommends the use of gloves while handling and working with Alternative Jacket cables, and thoroughly washing hands with soap and water after working with the cable. Avoid contact with eyes and take normal precautions including the use of safety glasses when preparing cable.

- Non-toxic, environmentally friendly
- Unpleasant to taste and smell
- Reduces the amount and intensity of chews
- Standard warranty applies
- Designated by 3 green tracers on the outer jacket



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