COMMSCOPE®
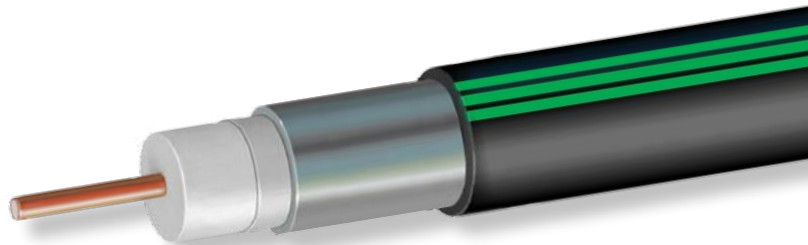
Alternative Jacket™ Material

Rodents' gnawing on telecommunication cables is a costly maintenance issue every cable system operator faces on a regular basis. The damage inflicted on the cables results in signal degradation, signal leakage, and, in severe cases, outages. This problem is not usually identified until a customer complains and a service technician finds it during the course of troubleshooting the problem. This has a negative impact on both customer satisfaction and operating expense for the system.

CommScope Alternative Jacket QR® cable

The cause of rodents' gnawing on cables is a learned behavior that is necessary for its survival. Rodents' teeth continually grow. If that growth is left unchecked, the animal's teeth will eventually overlap and effectively create a barrier to the mouth, which would result in starvation.

Unfortunately, many rodents have learned that, by gnawing on semi-hard materials, such as found in telecommunication cables, their teeth will grind down—offsetting their natural progressive growth.

CommScope has developed a solution to this issue. Our Alternative Jacket™ cable jacket resists rodent chews by being unpleasant to taste. CommScope uses food-grade additives in the Alternative Jacket product that are RoHS compliant, nontoxic, nonhazardous, and environmentally safe. The additives act as a chemosensory type of aversion without causing harm to either the animals or the environment.

These food-grade additives have been used in a variety of applications for similar purposes that include:

1. Telecommunication and power wires and cables
2. Agriculture—drip/ micro irrigation systems
3. Gas sector—gas hauling pipes
4. Defense components—mine casing
5. Heritage construction preservation
6. Railway carriages
7. Aircraft arrestor systems
8. Automobile—wiring harness and other engine components
9. OEMs (original equipment manufacturing)—wiring of domestic/industrial appliances
10. Trash bags and bins

The additives are blended with standard jacket materials such as polyethylene (PE) and polyvinylchloride (PVC). The additives and special processing requirements do add cost to the final product but that is certainly offset by the benefits. CommScope includes green tracer stripes to readily distinguish cables with Alternative Jacket and make it easier to track proper use.

Alternative Jacket is intended to create an aversion by creating an unpleasant experience for any rodent that gnaws on it, ensuring that it will not want to gnaw on it again. This subsequently conditions the rodent to instinctively stay away from it and stores that condition for future reference.

There have been multiple field trials and many subsequent miles of Alternative Jacket installed in many networks around the country. The three largest field trials documented are provided below:

Field trial installed in Oklahoma City, OK (Cox Communications)
7 sites installed by March 2004
61 spans total
No chews reported to date

Field trial installed in Chattanooga, TN (Comcast)
6 sites installed by October 2004
16 spans total
No chews reported to date

Field trial installed in Omaha, NE (Cox Communications)
6 sites installed by January 2005
25 spans total
No chews reported to date

These field trial sites were selected based on their reported history and severity of squirrel chew issues. Sites were chosen within the systems where they had previously experienced repeated squirrel chew damage on aerial plant within the same year. After replacing the spans with Alternative Jacket, the only damage reported was cosmetic in nature, where the squirrel had begun to gnaw on the jacket but quickly stopped—leaving only surface scratches in the jacket.

Alternative Jacket can help system operators lower operating expenses, improve plant reliability, and offer a better customer experience to their subscribers.

Everyone communicates. It's the essence of the human experience. *How* we communicate is evolving. Technology is reshaping the way we live, learn and thrive. The epicenter of this transformation is the network—our passion. Our experts are rethinking the purpose, role and usage of networks to help our customers increase bandwidth, expand capacity, enhance efficiency, speed deployment and simplify migration. From remote cell sites to massive sports arenas, from busy airports to state-of-the-art data centers—we provide the essential expertise and vital infrastructure your business needs to succeed. The world's most advanced networks rely on CommScope connectivity.

COMMSCOPE®