

BECAUSE YOUR BUSINESS RUNS THROUGH US

# Armor-Tek

INTERLOCK ARMOR FIBER OPTIC CABLE



**Berk-Tek**<sup>®</sup>  
A NEXANS COMPANY



The traditional method of protecting your optical fiber cable usually means installing innerduct or expensive conduit and then pulling your cable.

## Not any more.

### THE SOLUTION: ARMOR-TEK

With a rugged, armored design delivering 10 to 13 times the crush resistance of standard fiber optic cable, Armor-Tek interlocked armor fiber cables are ideal for campus & building backbones, data centers and industrial applications.

There is also a more practical use for these well engineered fiber cables.

### A COST-EFFECTIVE ALTERNATIVE TO CONDUIT OR PLENUM INNERDUCT.

Armor-Tek fiber cables can be installed instead of traditional fiber cables in plenum innerduct or conduit. This provides the installer with a user-friendly, one-pull solution to an expensive and labor-intensive installation process.

By installing Armor-Tek fiber cables instead of plenum innerduct or conduit, savings can run from 25-50% in materials, and reduce costly installation time and labor costs as much as 60%—a significant advantage over traditional installation methods.

Plus, Armor-Tek fiber cables are not governed by fill ratios because they are UL listed as cable assemblies, allowing a higher concentration of cables in an area compared to conduit. And because they can be outdoor/indoor rated, and are extremely durable, Armor-Tek is an excellent choice for campus environments, too.

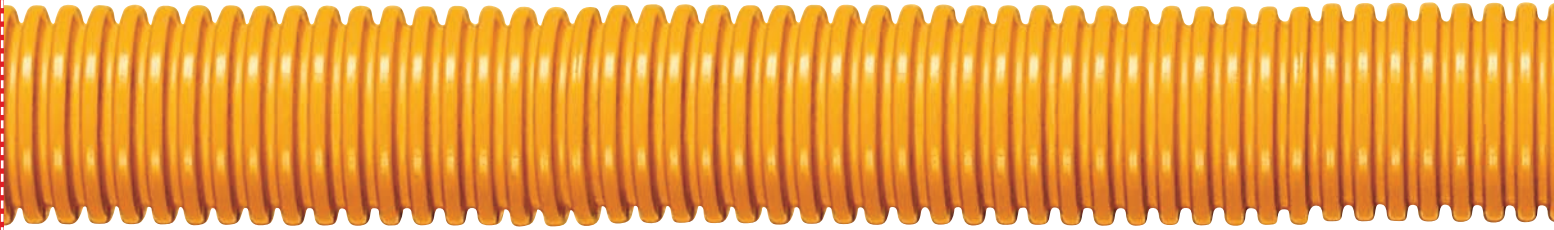
### ARMOR-TEK MAKES THE INEVITABLE CHANGES EASIER.

Armor-Tek fiber cables can also provide outstanding flexibility for modifications, alterations and changes, (MACs) as well as relocations, pathway changes or design modifications after the cable has been pulled, something conduit cannot easily accommodate.

### Typical Cost Advantages of Armor-Tek over Cable/Innerduct

	Indoor, Tight Buffer, Plenum, 12 Fibers (50/125* micron) w/Armor-Tek	Indoor, Tight Buffer, Plenum, 12 Fibers (50/125* micron)	Plenum, Innerduct, 1" ID
Price for 300'	\$705.00	\$483.75	\$487.50
Labor at \$100/hr, 1 hr req*	\$100.00	\$100.00	\$100.00
TOTAL	\$805.00	\$1171.25	
% Cost Increase if Cable/Innerduct Installed Separately	55%		

\*Using 2000 MHz•km Bandwidth Fiber capable of 300 meters distance at 10Gb Ethernet. Retail Price for 1" I.D. Plenum Innerduct estimated at \$1.63/ft for 300 ft.



Protecting optical fiber cables with interlocking armor provides improved network reliability, flexibility and security.

## Berk-Tek has the solution.

### ARMOR-TEK AT A GLANCE

- ▶ Industry-leading performance thanks to Berk-Tek GIGAlite, GIGAlite-10 and GIGAlite-10XB
- ▶ Reduces materials costs 25-50% by eliminating the need for conduit or plenum innerduct
- ▶ Reduces installation time as much as 60%
- ▶ Simplifies last minute relocations or pathway changes
- ▶ Greater concentration of cables allowed due to UL classification as cable assemblies, not governed by fill ratios
- ▶ More efficient use of space
- ▶ Simple single-pull installation with the use of a properly installed pulling grip
- ▶ Chemical and fuel resistant options for industrial and hazardous environments
- ▶ Interlocking armor delivers superior crush and rodent resistance as well as security
- ▶ Plenum, riser and zero-halogen materials available
- ▶ Available outdoor/indoor rated for use in campus environments
- ▶ Available in fiber counts of 6-216, loose tube or tight buffered
- ▶ Available as pre-terminated assemblies. Visit TekLAB at [www.berktek.com](http://www.berktek.com) for more information.

### APPLICATIONS

IEEE 802.3ae 10GBASE-X (10 Gb/s)  
 IEEE 802.3 1000BASE-SX/LX (1 Gb/s)  
 Fibre Channel FC-PH (1.062 Gb/s)  
 IEEE 802.3 10BASE-F (10 Mb/s)  
 IEEE 802.3 FOIRL (10 Mb/s)  
 FDDI (100 Mb/s)  
 ATM (155 Mb/s, 622 Mb/s, 1.2/2.4 Gb/s)

### STANDARDS

ISO/IEC 11801  
 EN 50173  
 Telecordia GR-409 & GR-20

ICEA S-104-696  
 ANSI/ICEA S-87-640  
 ETL, UL  
 OFNR/FT4, OFNP/FT6  
 ANSI/TIA/EIA-568-B.3

### INSTALL TIPS:

- ▶ Armored cable installed in an outdoor environment should be bonded when passing into an indoor environment
- ▶ For armor removal & cable preparation guidelines please visit the Technical Documents section at [www.berktek.com](http://www.berktek.com)
- ▶ Pulling tension should be placed on both the armored jacket and the strength members of the inner fiber cable to avoid separation. Use of a properly installed wire mesh pulling grip is highly recommended

Available with loose tube or tight buffered cable with 62.5  $\mu\text{m}$ , 62.5  $\mu\text{m}$  GIGAlite™, 50  $\mu\text{m}$  GIGAlite™, GIGAlite-10, GIGAlite-10XB and single-mode fiber and hybrid constructions.

Aluminum or steel interlock armor available with 10 to 13 times the crush resistance of a standard fiber cable.

Plenum or riser rated, UV resistant cable sheathing able to withstand the harsh environmental demands of a broad range of temperatures and conditions.

The jacketed armor remains flexible because of Berk-Tek's innovative spiral wrap armoring process.



## The Armor-Tek Advantage:

smaller size, extraordinary strength, superior flexibility and lower cost.

Armor-Tek fiber cables combine rugged dependability and Berk-Tek innovation for a unique cable design that is space efficient and extremely cost-effective.

### INDUSTRY LEADING PERFORMANCE. GUARANTEED.

Armor-Tek represents an innovative approach to cable design. Armor-Tek fiber cables combine a tight buffered or loose tube fiber cable with an aluminum or steel spirally wrapped armor casing. The overall assembly is then covered with a plenum or riser rated jacket to allow clear printing and prevent snags during installation.

At its core, Armor-Tek is a Berk-Tek fiber optic cable, designed to support high-speed, high powered Gigabit applications like Gigabit Ethernet®, 10 Gigabit Ethernet, Gigabit ATM and Fiber Channel—in fiber counts of 6 to 216.

Armor-Tek's installed performance is impressive—with attenuation and bandwidth specifications that far exceed industry standards. Because Armor-Tek is available with Berk-Tek's revolutionary line of GIGAlite™ multimode optical fiber technology, Armor-Tek also significantly extends your Gigabit Ethernet and 10 Gigabit Ethernet 850 nm VCSEL fiber distances—far beyond the IEEE spec. No other interlock armor multimode fiber cable surpasses Armor-Tek.

### OUTDOORS OR INDOORS. ARMOR-TEK IS UP TO THE CHALLENGE.

Outdoors, Armor-Tek is engineered to withstand the harshest environments, and the most demanding outside plant applications. Armor-Tek uses proven outside plant construction techniques in single-mode and multimode configurations, providing optimum performance, flexibility and reliability throughout your cable plant.

When combined with our Adventum™ all dry outdoor/indoor fiber optic cable technology, Berk-Tek Armor-Tek is ideal for both indoor and outdoor use. In this loose-tube construction both the cable core and the buffer tubes use Berk-Tek's unique gel-free water blocking system, DryGel™, a patented dry element technology that seals against water. That means Armor-Tek can be confidently employed outdoors, pulled through a conduit, or direct buried and can tolerate extreme temperatures (-40° to +75° C).

Indoors, in addition to its hazardous environment applications, Armor-Tek's plenum and riser ratings mean that it can be used in virtually any cable plant application: in backbones, between closets,

as fiber to the desk, as an alternative when existing pathways are beyond their fill ratios, and of course, in areas where extra physical protection is needed or where network security is a concern.

All with the reliable, premium performance you've come to expect from Berk-Tek.

### Armor-Tek is 25 to 50% smaller than traditional plenum innerduct.



48-count loose tube fiber with Berk-Tek Armor-Tek (.712 in. OD)

48-count loose tube fiber cable in a traditional plenum innerduct (1.0 in. ID)

The result: easier pulls, more efficient use of space and lower costs.



**GIGALITE™: STATE-OF-THE-ART LASER-OPTIMIZED 50-MICRON AND 62.5-MICRON OPTICAL FIBER TECHNOLOGY.**

- ▶ Available across Berk-Tek's entire fiber optic cable line.
- ▶ Enhanced DMD profile for superior performance at 1 Gb/s and 10 Gb/s.
- ▶ Enables the use of economical 850 nm transceivers for distances normally requiring single-mode transceivers costing two to three times as much.
- ▶ Full compatibility with installed 50/125-micron multimode; strong legacy support for 10 Mb/s and above.
- ▶ Perfect for data centers, storage area networks or campus/premise installations.
- ▶ GIGAlite 50-micron fiber (OM2+) guarantees 150 meters for 10 Gigabit Ethernet and 750 meters for 1 Gigabit Ethernet.
- ▶ GIGAlite-10 (OM3) guarantees 300 meters for 10 Gigabit Ethernet.
- ▶ GIGAlite-10XB (OM3+) guarantees 600 meters for 10 Gigabit Ethernet—the longest in the industry.

**BERK-TEK: AN UNWAVERING COMMITMENT TO QUALITY AND LEADERSHIP.**

Berk-Tek is a leader in network cabling, with over 100 different optical fiber, UTP, FTP, coaxial and hybrid network cable products and one of the most complete product lines in the industry. Our products are the choice for information intensive applications around the world, and our network cable solutions experience includes virtually every possible networking application and configuration imaginable.

Berk-Tek provides clear advantages within every cable series and for every application. All Berk-Tek UTP, FTP and optical fiber cables are engineered, manufactured and stringently tested in the United States. Our cabling solutions deliver reliable, robust, guaranteed superior product performance that consistently exceeds every applicable industry standard.

**NETCLEAR™: GUARANTEED TOTAL CHANNEL PERFORMANCE.**

NetClear is a strategic and engineering alliance of Berk-Tek and Ortronics, working together to provide seamlessly integrated, tuned network solutions. All NetClear solutions are independently tested and verified and are backed by a 25-year Total System Warranty. The result: a network cabling system that is guaranteed to exceed the bit error rate requirements of even the most demanding applications.

**OASIS: BERK-TEK'S INNOVATIVE OPEN ARCHITECTURE APPROACH.**

Berk-Tek pioneered true open architecture with OASIS: Open Architecture Systems Interconnection Solutions, an innovative approach that delivers guaranteed total channel performance with a variety of connectivity options, carefully engineered to support a myriad of advanced applications.

With OASIS, Berk-Tek provides real solutions for the structured cabling industry with a level of technology, flexibility and reliability that is unmatched. Bottom line: the OASIS Program is powerful enough to deliver guaranteed performance over 15 years, yet flexible enough to utilize your preferences for connectivity.



**Berk-Tek®**  
A NEXANS COMPANY

**Corporate Headquarters**

132 White Oak Road  
New Holland, PA 17557  
USA

TEL: 717-354-6200

TEL: 800-237-5835

FAX: 717-354-7944

[www.berktek.com](http://www.berktek.com)

**In Canada, please contact:**

Nexans Canada Inc.  
140 Allstate Parkway  
Markham, Ontario  
L3R 0Z7 Canada

TEL: 905-944-4300

TEL: 800-237-5835

FAX: 905-944-4390

[www.berktek.com](http://www.berktek.com)

ARMORTEK 06/07

**XG LAN**  
AUTHENTIC 10 Gb/s

**OASIS**  
Open Architecture Systems  
Interconnection Solutions

**NET CLEAR™**  
BERK-TEK ORTRONICS SOLUTIONS