

Berk-Tek Indoor/Outdoor LSZH Riser Adventum® with Armor-Tek™ (LTRZK)

Berk-Tek's Adventum Armor-Tek products consist of indoor/outdoor rated fiber optic loose tube cables encased with an aluminum spirally wrapped armor in an interlocking configuration. The armored cable is then covered with a riser rated jacket to prevent snags during installation.

DESCRIPTION

Construction

LSZH loose tube cable constructions (up to 432 optical fibers) with aluminum interlock armor and an overall LSZH riser rated jacket.

Applications

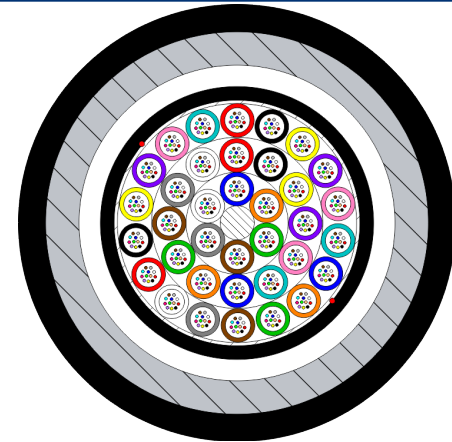
Armor-Tek fiber cables can be used in any of the following installation environments: indoor, indoor/outdoor, in backbones, between closets and in fiber to the desk. Armor-Tek is a viable and cost effective solution for applications where a pathway is beyond its fill ratio, for areas where extra physical security is a concern, in fast track installations, between buildings, or in trays.

Berk-Tek recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

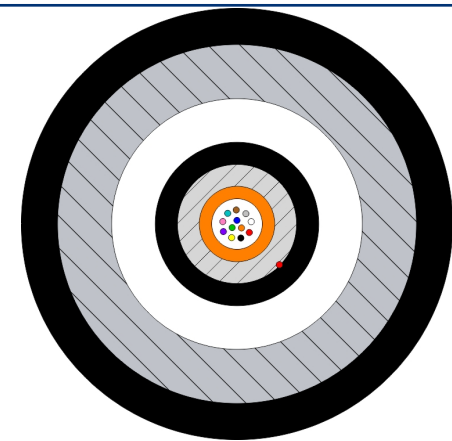
Berk-Tek's Adventum Loose Tube LSZH Riser fiber optic cables (U.S. Patent No. 6,178,278) are suitable for all passive and active optical network designs requiring high speed data applications, including (but not limited to):

- ETHERNET: 10BASE – 40GBASE (10BASE, 100BASE, 1000BASE, 10GBASE, 40GBASE, 100GBASE, 400GBASE)
- Fibre Channel: 1G-FC – 128GFC (1, 2, 4, 8, 16, 32, 128 GFC)
- SONET: OC-1 – OC-768 (OC -1, 3, 12, 24, 48, 192, 768)
- SDH: STM-0 – STM-256 (STM-0, 1, 4, 16, 64, 256)
- OTN: OTU-1 – OTU4 (OTU1, 2, 2e, 2f, 3, 3e2, 4)
- CPRI: CPRI-1 – CPRI-9 (CPRI-1, 2, 3, 4, 5, 6, 7, 7a, 8, 9)
- PON (SMF): RFoG, APON, BPON, EPON, GPON, WDM-PON, NG-PON

These cables are compliant with the Wire and Cable Requirements of NFPA 130 (2014), section 12.2 Flame Spread and Smoke Release.



For fiber counts from 24-432



For 6 and 12 fiber cables

STANDARDS

International EN 50173;
ISO/IEC 11801

National ANSI/ICEA S-104-696;
ANSI/ICEA S-83-596;
ANSI/TIA-568.3-D; NFPA 130;
Telcordia GR-409

Features

- Low Smoke Zero Halogen polymer used for jackets and loose tubes.
- Jacketed armor that remains flexible due to the spiral wrap armoring process
- The armored design allows for an easy one-pull installation into any environment
- Sunlight resistant outer jacket per UL 444 clause 7.22 protects the cable in outside plant installations
- Aluminum interlock armor, covered by a LSZH outer jacket
- Aluminum interlock offers 10 to 13 times the impact resistance over all-dielectric optical cable
- Compact outside diameters when compared to plenum innerduct or conduit

Benefits

- Eliminate the need for conduit or plenum innerduct by installing interlock armor cable, providing a significant cost savings in both materials and labor
- Installation time can be reduced by as much as 60% versus installing conduit or innerduct
- Armor-Tek optical fibers cables accommodate last minute relocations or pathway changes whereas innerduct or conduit is not a flexible alternative
- Armor-Tek cables are not governed by fill ratios because they are UL listed as cable assemblies, allowing higher concentrations of cables in an area than allowed with conduit
- Can be installed in campus environments when used with indoor/outdoor rated cables such as Adventum
- Provides additional protection and security for your fiber backbone due to the ruggedness of the armoring materials

Country of Origin: U.S.A.

CHARACTERISTICS

Construction characteristics

Type of cable	Loose tube
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Usage characteristics

RoHS compliant	Yes
Recommended operating temperature range	-40 .. 75 °C
Ambient installation temperature, range	-20 .. 60 °C
Recommended storage temperature range	-60 .. 85 °C

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TECHNICAL DATA - PHYSICAL						Install		Long Term		Install		Long Term	
Fibers	Part Number Prefix	Diameter		Weight		Min. Bend Radius				Max. Loading			
		in.	mm	lb./kft	kg/km	in.	cm	in.	cm	lbf.	N	lbf.	N
6	LTRZK006	0.618	15.7	128	191	9.3	23.5	6.2	15.7	150	667	45	200
12	LTRZK012	0.618	15.7	128	191	9.3	23.5	6.2	15.7	300	1335	90	400
12	LTRZK12B012	0.744	18.9	187	278	11.2	28.3	7.4	18.9	300	1335	90	400
24	LTRZK12B024	0.744	18.9	187	278	11.2	28.3	7.4	18.9	300	1335	90	400
48	LTRZK12B048	0.744	18.9	187	278	11.2	28.3	7.4	18.9	300	1335	90	400
72	LTRZK12B072	0.865	22.0	251	373	13.0	33.0	8.7	22.0	600	2670	200	890
96	LTRZK12B096	0.965	24.5	291	433	14.5	36.8	9.7	24.5	600	2670	200	890
144	LTRZK12B144	1.018	25.9	387	576	15.3	38.8	10.2	25.9	1000	4448	300	1335
288	LTRZK12B288	1.134	28.8	451	672	17.0	43.2	11.3	28.8	1000	4448	300	1335
432	LTRZK12B432	1.269	32.2	534	794	19.0	48.3	12.7	32.2	1000	4448	300	1335

TECHNICAL DATA										
Fiber Type	Part Number Suffix	Berk-Tek Fiber	Core Size	Wavelength (nm)	Maximum Attenuation (dB/km)	Effective Modal Bandwidth @ 850 nm (MHz·km)	Distance (meters)			
Multimode - Bend Insensitive							1 GbE	10 GbE	40 GbE	100 GbE
OM1	CB3510/25	GIGAlite	62.5 µm	850/1300	3.5/1.0	200	300	33	N/A	N/A
OM3	EB3010/25	GIGAlite-10	50 µm	850/1300	3.0/1.0	2000	1000	300	100	70
OM4	FB3010/F5	GIGAlite-10FB	50 µm	850/1300	3.0/1.0	4700	1040	550	150	100
OM4+	XB3010/X5	GIGAlite-10XB	50 µm	850/1300	3.0/1.0	4900	1210	600	300	150
WideBand Multimode - Bend Insensitive							1 GbE	10 GbE	40 GbE	100 GbE
OM5	WB3010/W5	GIGAlite-10WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100
Single-Mode - Bend Insensitive - ITU-T G.657.A1							1 GbE	10 GbE	40 GbE	100 GbE
OS2	AB0403	Standard for Loose Tube	SMF	1310/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000

STANDARD SHEATH COLORS - LOOSE TUBE - BLACK

Fiber Type	Core Size (μm)	ISO-TIA Standard	Effective Modal BW @ 850 nm	Overfilled Launch BW @ 850 nm	Attenuation @ 850 nm	Attenuation @ 1300 nm	Attenuation @ 1550 nm	Sheath Color
AB	8.3	OS2	NS	NS	NS	0.4 dB/km	0.3 dB/km	Black
CB	62.5	OM1	200 MHz·km	200 MHz·km	3.5 dB/km	1.0 dB/km	NS	Black
EB	50	OM3	2000 MHz·km	1500 MHz·km	3.0 dB/km	1.0 dB/km	NS	Black
FB	50	OM4	4700 MHz·km	3500 MHz·km	3.0 dB/km	1.0 dB/km	NS	Black
XB	50	OM4+	4900 MHz·km	3675 MHz·km	3.0 dB/km	1.0 dB/km	NS	Black
WB	50	OM5	4700 MHz·km	3500 MHz·km	3.0 dB/km	1.0 dB/km	NS	Black

NS = Not Specified

MANUFACTURING RELEASE

IMPORTANT NOTICE: This product specification is provided for informational purposes only in order to illustrate typical product constructions, applications and/or methods of installation. Because conditions of actual installation and use are unique and will vary, Berk-Tek makes no representation or warranty as to the reliability, accuracy or completeness of this data, even if Berk-Tek is aware of the product's intended use or purpose. Furthermore, this data does not constitute, nor should it be regarded or relied upon, as professional engineering advice. Installation of product should only be done by qualified personnel and in conformance with all safety, electrical and other applicable codes, standards, rules or regulations. Appropriate and correct product selection, installation and use, and compliance with all such codes, standards, rules and regulations, is a customer/end-user responsibility. Product specifications, standards, programs or services are subject to improvement or changes without notice. Berk-Tek accepts no liability for typographical errors, technical inaccuracies, omissions or misuse of the information contained herein. Changes will be periodically made to address any such issues.