

# Berk-Tek Indoor/Outdoor LSZH Riser Adventum® (LTRZ)

Berk-Tek's revolutionary all dry loose tube Indoor/Outdoor LSZH Adventum cables are designed to be used in riser rated environments. This cable design utilizes Berk-Tek's unique DryGel waterblocking system. DryGel technology utilizes super absorbent polymers to replace the messy gel filler inside the LSZH fiber tubes. Adventum LSZH cables have no gel filler, and are rated for riser installations.

## DESCRIPTION

Berk-Tek's all dry loose tube cable design can be used in all typical campus and outdoor/indoor installations, and is available with standard multimode, single-mode and GIGAlite™ fibers. This design affords the installer the ability to place cable anywhere in a network, bypassing the traditional transition points required in most installations. Adventum LSZH Riser cable is available in 6 to 432 count fiber constructions. These cables have been thoroughly tested in accordance with Telcordia GR-409 Issue 2, ICEA-596 Edition 3, and ICEA-696 Edition 2 standards where applicable. These cables are rated OFNR-ST1 and LSHF, they meet the water penetration requirements of Telcordia GR-20, and they meet the requirements of IEC 60332-1-1, IEC 60332-2-2, IEC 60332-3-24, IEC 61034-2, and IEC 60754-3. These cables are compliant with the Wire and Cable Requirements of NFPA 130 (2014), section 12.2 Flame Spread and Smoke Release. They are suitable for railway and mass transit infrastructure in tunnels, as well as for Tray installations in industrial environments.

### Buffer Tube Construction

DryGel blocked color coded LSZH dry loose tubes containing up to 12, 250 µm, individually colored fibers.

### Outdoor Consideration

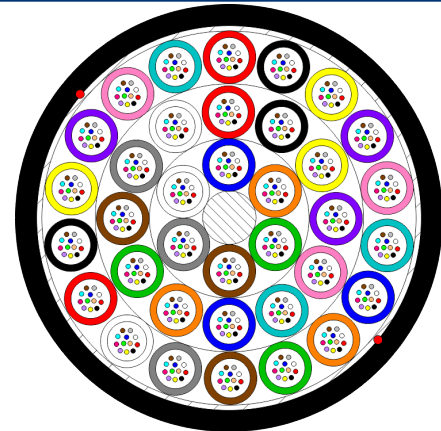
Berk-Tek recommends that loose tube cables be utilized in an outside plant installation environment. Loose tube cables are especially recommended if the interbuilding conduit system is likely to fill with water.

### Applications

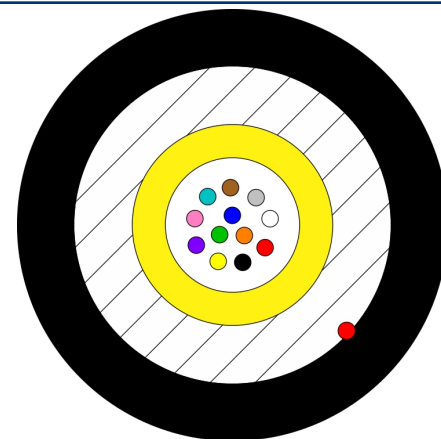
Berk-Tek recommends installation procedures per ANSI/TIA-758, Customer-owned Outside Plant Telecommunications Infrastructure Standard.

Berk-Tek's Adventum Loose Tube, LSZH Riser Rated fiber optic cable is intended for all high speed data applications, including:

- 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 only): RFoG, APON, BPON, EPON, GPON, WDM-PON, NG-PON



For fiber counts from 24-432



For 6 and 12 fiber cables

## STANDARDS

**International** EN 50173;  
IEC 60332-1; IEC 60332-2-2;  
IEC 60332-3-24; IEC 60754;  
IEC 61034; ISO/IEC 11801

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

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## Features

- Designed to support Gigabit Ethernet, Gigabit ATM, Fibre Channel and other high-speed applications
- High tensile strength, crush resistant and small diameter design
- LSZH Riser rating enables installation to go directly from outside plant to riser shaft
- All Dry Cable Core and Loose Buffer Tubes use DryGel water blocking system
- Sunlight resistant outer jacket per UL 444 clause 7.22 protects the cable in outside plant installations

## Benefits

- Compact, water blocked, riser rated, flexible loose tube design allows for installation in any outside plant or interior space
- No cleaning of gels required for installation, greatly reducing installation time and cost
- Transition points in network are not needed

**Country of Origin: U.S.A.**

## CHARACTERISTICS

### Construction characteristics

Type of cable Loose tube

### 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

## 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

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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	LTRZ006	0.237	6.0	26	39	3.6	9.0	2.4	6.0	150	667	45	200
12	LTRZ012	0.237	6.0	27	40	3.6	9.0	2.4	6.0	300	1335	90	400
12	LTRZ12B012	0.390	9.9	62	92	5.9	14.9	3.9	9.9	300	1335	90	400
24	LTRZ12B024	0.390	9.9	62	92	5.9	14.9	3.9	9.9	300	1335	90	400
48	LTRZ12B048	0.390	9.9	61	91	5.9	14.9	3.9	9.9	300	1335	90	400
72	LTRZ12B072	0.467	11.9	88	130	7.0	17.8	4.7	11.9	600	2670	200	890
96	LTRZ12B096	0.541	13.7	115	171	8.1	20.6	5.4	13.7	600	2670	200	890
144	LTRZ12B144	0.696	17.7	194	288	10.4	26.5	7.0	17.7	1000	4448	300	1335
288	LTRZ12B288	0.818	20.8	248	369	12.3	31.2	8.2	20.8	1000	4448	300	1335
432	LTRZ12B432	0.953	24.2	291	433	14.3	36.3	9.5	24.2	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)			
<b>Multimode - Bend Insensitive</b>							<b>1 GbE</b>	<b>10 GbE</b>	<b>40 GbE</b>	<b>100 GbE</b>
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
<b>WideBand Multimode - Bend Insensitive</b>							<b>1 GbE</b>	<b>10 GbE</b>	<b>40 GbE</b>	<b>100 GbE</b>
OM5	WB3010/W5	GIGAlite-10WB	50 µm	850-953/1300	3.0/1.0	4700	1040	550	190	100
<b>Single-Mode - Bend Insensitive - ITU-T G.657.A1</b>							<b>1 GbE</b>	<b>10 GbE</b>	<b>40 GbE</b>	<b>100 GbE</b>
OS2	AB0403	Standard for Loose Tube	SMF	1310/1550	0.4/0.3	N/A	≥ 5000	≥ 10000	≥ 10000	≥ 10000

## MANUFACTURING RELEASE

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