

Cleerline BendSafe® 2-24 strand 900 µm tight buffered fiber is a distribution style fiber cable with an overall riser or plenum jacket.

BendSafe® distribution is ideal for inter-building or intra-building data communication backbones.

Cleerline BendSafe® distribution multimode is fully compatible with all common connector systems for 50/125 multimode fiber.

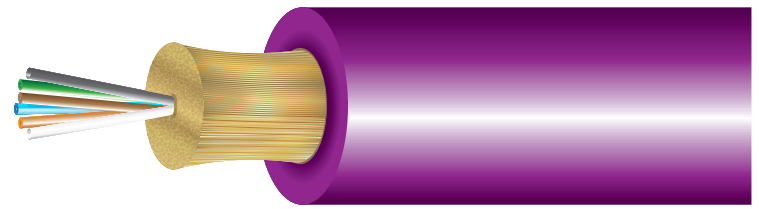
Cleerline BendSafe® fibers provide the ultimate in reliable signal transfer in today's traditional fiber constructions.

FEATURES AND BENEFITS

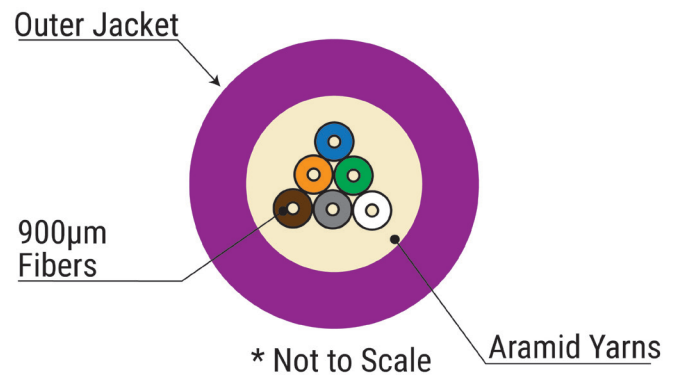
- BendSafe® Dynamic Fatigue rating Nd = 27
- High mechanical strength
- BendSafe® 900 µm tight buffered fibers
- Compatible with common connector systems for 50/125 multimode
- Manufactured to exact tolerances and specifications
- Ultra low attenuation on tight bend radius

APPLICATIONS

- Inter-/Intra-building voice or data communication
- Installation in ducts or underground conduit
- Fiber-to-the-desk (FTTD) / Fiber-to-the-Home (FTTH)
- UL listed type OFNP for installation in ducts, plenums and other spaces used as environmental air returns when installed in accordance with NEC article 770-51 (a) and 770-53(a)



3D VIEW



TYPICAL CROSS SECTION

PART NUMBER	FIBERS	FIBER TYPE	DESCRIPTION	TYPE RISER/PLENUM	OUTER DIAMETER	WEIGHT (LB / 1000 FT)
TN002M4D9MX	2 Fibers	OM4	2 Strand BendSafe® - 1000 ft Spool	X= R/P	4.3 mm	11
TN002M4D9MX-B	2 Fibers	OM4	2 Strand BendSafe® - Cut to Order	X= R/P	4.3 mm	11
TN004M4D9MX	4 Fibers	OM4	4 Strand BendSafe® - 1000 ft Spool	X= R/P	4.7 mm	13
TN004M4D9MX-B	4 Fibers	OM4	4 Strand BendSafe® - Cut to Order	X= R/P	4.7 mm	13
TN006M4D9MX	6 Fibers	OM4	6 Strand BendSafe® - 1000 ft Spool	X= R/P	5.1 mm	16
TN006M4D9MX-B	6 Fibers	OM4	6 Strand BendSafe® - Cut to Order	X= R/P	5.1 mm	16
TN012M4D9MX	12 Fibers	OM4	12 Strand BendSafe® - 1000 ft Spool	X= R/P	6.4 mm	23
TN012M4D9MX-B	12 Fibers	OM4	12 Strand BendSafe® - Cut to Order	X= R/P	6.4 mm	23
TN024M4D9MX	24 Fibers	OM4	24 Strand BendSafe® -1000 ft Spool	X= R/P	8.1 mm	37
TN024M4D9MX-B	24 Fibers	OM4	24 Strand BendSafe® - Cut to Order	X= R/P	8.1 mm	37

FIBER	
Fibers	2, 4, 6, 12 & 24
Type	50/125 multimode OM4
Color Coding	Per TIA/EIA 598C

JACKET	
Type	Riser Rated PVC (Indoor) Plenum Rated PVC + UV I/O
Color	Magenta
Outer Diameter	Varies by part number
Markings	Sequential Foot Markings
Strength Member	Aramid (Plenum + water blocking yarns)

PHYSICAL DATA		
Storage Temperature Range	Riser	Plenum
	-55 °C to +85 °C	-40 °C to +85 °C
Installation Temperature Range	0 °C to +75 °C	0 °C to +75 °C
Operating Temperature Range	-40 °C to +85 °C	-20 °C to +85 °C
Max Tensile Load, Installation	2-4 Fiber	1405 N (315 lbf)
	6 Fiber	1610 N (362 lbf)
	12-24 Fiber	2700 N (607 lbf)
Max Tensile Load, Long Term	2-4 Fiber	455 N (102 lbf)
	6 Fiber	535 N (120 lbf)
	12-24 Fiber	600 N (135 lbf)
Min. Bend Radius, Unloaded	10 x O.D.	
Min. Bend Radius, Loaded	20 x O.D.	
Crush Resistance	100 N/cm	
Impact Resistance (min)	25 Impacts	
Flexing ± 90° (min)	25 Cycles	
Cable Package	Length varies by customer request, spooled	
Rating	FT4 - Riser / FT6 - Plenum	
Fatigue Resistance Parameter @23 °C, 41% RH	= 27 Nd	

ENVIRONMENTAL CHARACTERISTICS	
Temperature Cycling Test @ 850 nm and 1300 nm -60 °C to +85 °C	≤ 0.1 dB/km
Temperature and Humidity Cycling Test @ 850 nm and 1300 nm -10 °C to +85 °C, 4% - 90% RH	≤ 0.1 dB/km
Damp Heat Dependence Test @ 850 nm and 1300 nm +85 °C, 85% RH for 30 days	≤ 0.1 dB/km
Dry Heat Dependence Test @ 850 nm and 1300 nm +85 °C for 30 days	≤ 0.1 dB/km
Watersoak Dependence Test @ 850 nm and 1300 nm +20 °C for 30 days	≤ 0.1 dB/km

PHYSICAL CHARACTERISTICS		
Core / Cladding Concentricity Error	≤ 1.0 μm	
Core Diameter	50.0 ± 2.5 μm	
Core Non-Circularity	≤ 5%	
Cladding Diameter	125 ± 1 μm	
Cladding Non-Circularity	≤ 1.0%	
UV Acrylate Coating Diameter	245 ± 7 μm	
Coating Strip Force	Average	1.5 N
	Peak	≥ 1.3, ≤ 8.9 N
Fiber Curl	≥ 4 m	
Proof Test	100 kpsi	
Bend Induced Attenuation	2 turns around a mandrel of 15 mm @ 850 nm / 1300 nm	≤ 0.1 / 0.3 dB
	2 turns around a mandrel of 7.5 mm @ 850 nm / 1300 nm	≤ 0.2 / 0.5 dB
Length (typical)	1.1 ~ 8.8 km	

OPTICAL CHARACTERISTICS		
Attenuation Coefficient	850 nm	≤ 2.4 dB/km
	1300 nm	≤ 0.6 dB/km
Numerical Aperture	0.200 ± 0.015	
Overfilled Launch Bandwidth (OFL BW)	850 nm	≥ 3500 MHz · km
	1300 nm	≥ 500 MHz · km
High Performance EMB	850 nm	≥ 4700 MHz · km

BACKSCATTER CHARACTERISTICS		
Attenuation Uniformity	≤ 0.08 dB/km	
Group Index of Refraction	850 nm	1.482
	1300 nm	1.477

COMPLIANCE	
ETL Listed Type OFNR, CSA FT4, ICEA S-83-596 & OFNP, CSA FT6 / ICEA S-104-696. RoHS Compliant Directive 2011/65/EUSSF® conforms to the requirement of IEC 60793 A1a, ISO/IEC 11801 & ITU-T G.651.1 850 nm Laser-Optimized 50 μm core multimode fiber for 10 Gb/s and above applications.	