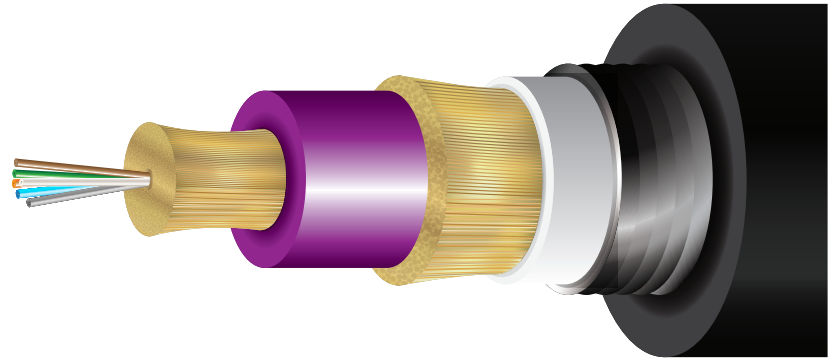


Cleerline BendSafe® Armored Direct Burial Distribution fiber cable consists of a PE overall jacket with 6 - 12 fibers and water-blocking aramid yarns.

The core is protected by a corrugated armored steel tube that offers easy installation and high crush resistance. A polyethylene, UV-resistant jacket protects the cable, allowing direct burial.

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

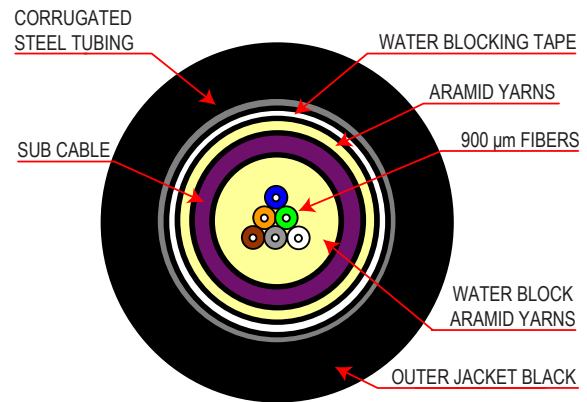
This product offers bend performance beyond EIA SP-2840A, as well as superior crush resistance and superior pull.



3D VIEW

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



TYPICAL CROSS SECTION

APPLICATIONS

- Outdoor/OSP Direct Burial applications
- Installations requiring high crush resistance
- External environment harsh conditions exposure

PART NUMBER	FIBERS	DESCRIPTION	TYPE	OUTER DIAMETER	WEIGHT (LB / 1000 FT)
TD006M4D9BN	6 Fibers	6 Strand BendSafe® - 1000 ft Spool	PE-UV	10 mm	67
TD006M4D9BN-B	6 Fibers	6 Strand BendSafe® - Cut to Order	PE-UV	10 mm	67
TD012M4D9BN	12 Fibers	12 Strand BendSafe® - 1000 ft Spool	PE-UV	11.3 mm	85
TD012M4D9BN-B	12 Fibers	12 Strand BendSafe® - Cut to Order	PE-UV	11.3 mm	85

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

JACKET	
Type	PE-UV, moisture resistant (Outdoor)
Color	Black
Outer Diameter	Varies by Part Number
Markings	Sequential Foot Markings
Strength Member	Aramid + water blocking yarns

PHYSICAL DATA	
Storage Temperature Range	-20 °C to +60 °C
Installation Temperature Range	-20 °C to +60 °C
Operating Temperature Range	-20 °C to +60 °C
Max Tensile Load, Instalation	2700 N (607 lbf)
Max Tensile Load, Long Term	890 N (200 lbf)
Min. Bend Radius, Unloaded	15 x O.D.
Min. Bend Radius, Loaded	20 x O.D.
Crush Resistance	440 N/cm
Impact Resistance (min)	25 Impacts
Flexing ± 90° (min)	25 Cycles
Cable Package	Length varies by customer request, spooled
Rating	Outdoor/OSP
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

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

PHYSICAL CHARACTERISTICS		
Core / Cladding Concentricity Error	≤ 1.0 μm	
Core Diamter	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 Enduced 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

COMPLIANCE

BendSafe® conforms to the requirement of IEC 60793-2-10 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.