

# Class 3 Limited Power Interlocking Armored Cables, FREEDM<sup>®</sup>, Riser

CORNING

## Features and Benefits

### 2-in-1 composite cable design

One cable meets power and signal needs

### 12, 14, 16 or 20 AWG copper conductors

Power transmission with flexibility in design

### 2, 4, 6, 8, 12 or 24 ClearCurve<sup>®</sup> ZBL or SMF-28<sup>®</sup> Ultra fibers

Reliable performance in challenging routes

### Mutual capacitance between adjacent conductors

<50 pF/ft

### Conductor insulation material and thickness

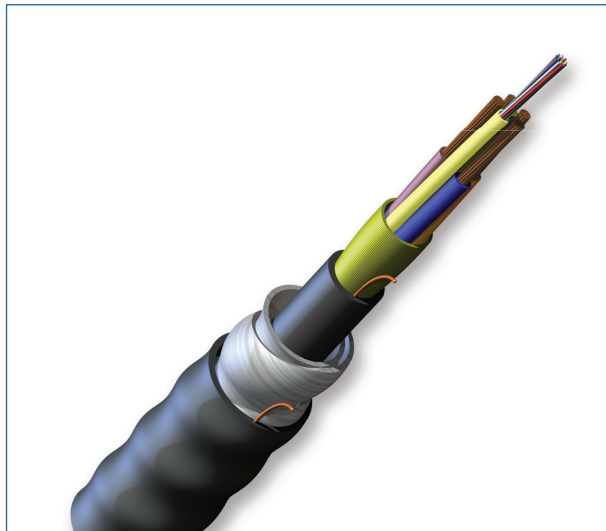
PVC insulation, thickness varies depending on AWG size

### Conductor color code

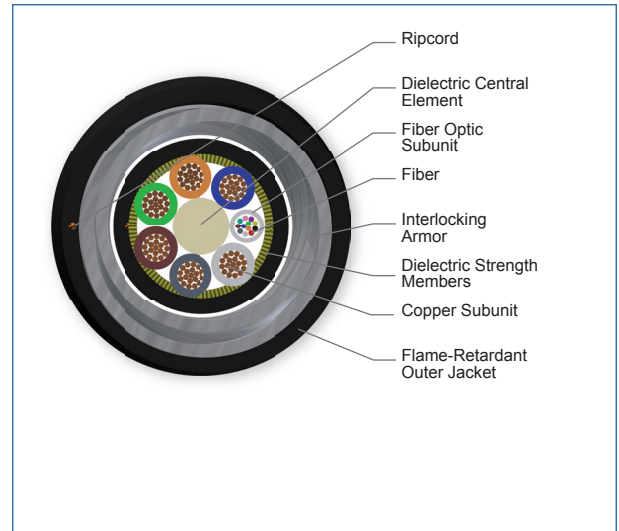
Same as Telcordia color code

Corning<sup>®</sup> Class 3 Limited Power Cables provide the ultimate solution for indoor/outdoor remote powering of distributed antenna systems, optical networks, small cells and more. The design uses fiber and linear-laid copper conductors rated at 300 VAC. These cables are suitable for use with remote powering systems and +/-190VDC installations in accordance with NEC Article 830.15. They may also be used with lowvoltage installations in accordance with NEC Article 725.

The Class 3 Limited Power Cables also provide a time- and cost-saving solution for installations requiring remotely powered equipment. By integrating linear-laid copper and loose tube fiber in one cable, class 3 limited power cables eliminate the need to install separate power and fiber cables. This saves installation time, labor costs and duct or tray space. This compact and versatile design is available with interlocking armor option for additional protection where conduit may not be feasible.



Class 3 Limited Power Interlocking Armored Cables, Indoor/Outdoor Riser, 12-Fibers



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## Standards

**Approvals and Listings** CSA certified listed to UL 444, CSA C22.2, No. 214  
NEC Article 725 Class 3 (CL3R)

**Common Installations** Compliant with ICEA S-83-596 (compliant at tensile loads listed in the specifications table)

**Design and Test Criteria** ICEA S-120-742, UL 13, 300 VAC, 80 C

## Specifications

Temperature Range	
Storage	-40 °C to 70 °C (-40 °F to 158 °F)
Installation	0 °C to 60 °C (32 °F to 140 °F)
Operation	-40 °C to 70 °C (-40 °F to 158 °F)

Fiber Count	Number of Conductors	Weight	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation
3.00 mm MIC <sup>®</sup> 250 with 12 AWG					
4 - 12	4	352 kg/km (236 lb/1000 ft)	16.6 mm (0.65 in)	249 mm (9.80 in)	166 mm (6.54 in)
4 - 6	6	455 kg/km (305 lb/1000 ft)	21.3 mm (0.84 in)	319.5 mm (12.58 in)	213 mm (8.39 in)
6 - 12	12	839 kg/km (559.5 lb/1000 ft)	38 mm (1.50 in)	570 mm (22.44 in)	380 mm (14.96 in)
12	6	504 kg/km (338 lb/1000 ft)	22.9 mm (0.90 in)	343.5 mm (13.52 in)	229 mm (9.02 in)
24	12	871 kg/km (583.6 lb/1000 ft)	38 mm (1.50 in)	570 mm (22.44 in)	380 mm (14.96 in)
3.00 mm MIC <sup>®</sup> 250 with 14 AWG					
6	12	399 kg/km (267 lb/1000 ft)	23.2 mm (0.91 in)	348 mm (13.70 in)	232 mm (9.13 in)
6	6	249 kg/km (167 lb/1000 ft)	18.1 mm (0.71 in)	271.5 mm (10.69 in)	181 mm (7.13 in)
6 - 12	4	284 kg/km (190 lb/1000 ft)	17.3 mm (0.68 in)	259.5 mm (10.22 in)	173 mm (6.81 in)
6	2	207 kg/km (139 lb/1000 ft)	14.6 mm (0.57 in)	219 mm (8.62 in)	146 mm (5.75 in)

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Fiber Count	Number of Conductors	Weight	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation
12	12	400 kg/km (268 lb/1000 ft)	23.2 mm (0.91 in)	348 mm (13.70 in)	232 mm (9.13 in)
12	2	208 kg/km (139 lb/1000 ft)	14.6 mm (0.57 in)	219 mm (8.62 in)	146 mm (5.75 in)
12	6	249 kg/km (167 lb/1000 ft)	17.20 mm (0.67 in)	271.5 mm (10.69 in)	181 mm (7.13 in)
24	12	405 kg/km (271 lb/1000 ft)	23.2 mm (0.91 in)	348 mm (13.70 in)	232 mm (9.13 in)
24	4	301 kg/km (202 lb/1000 ft)	17.3 mm (0.68 in)	259.5 mm (10.22 in)	173 mm (6.81 in)
24	2	236 kg/km (158 lb/1000 ft)	16.0 mm (0.63 in)	240 mm (9.45 in)	160 mm (6.30 in)
MIC <sup>®</sup> 250 2.0 with 16 AWG					
6 - 24	12	249 kg/km (167 lb/1000 ft)	18.1 mm (0.71 in)	271.5 mm (10.69 in)	181 mm (7.13 in)
6 - 12	6	170 kg/km (114 lb/1000 ft)	14.6 mm (0.57 in)	219 mm (8.62 in)	146 mm (5.75 in)
6 - 12	4	136 kg/km (91 lb/1000 ft)	15 mm (0.59 in)	225 mm (8.86 in)	150 mm (5.91 in)
6 - 24	2	107 kg/km (72 lb/1000 ft)	13.3 mm (0.52 in)	199.5 mm (7.85 in)	133 mm (5.24 in)
24	6	183 kg/km (123 lb/1000 ft)	16.0 mm (0.63 in)	240 mm (9.45 in)	160 mm (6.30 in)
24	4	183 kg/km (123 lb/1000 ft)	16.0 mm (0.63 in)	240 mm (9.45 in)	160 mm (6.30 in)

## Chemical Characteristics

RoHS

Free of hazardous substances according to RoHS 2011/65/EU

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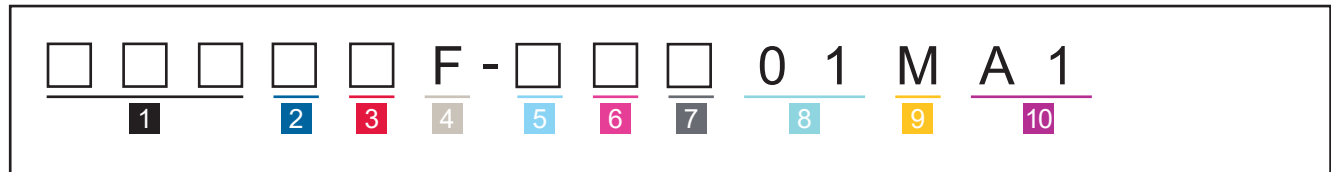
## Transmission Performance

Single-mode		
Fiber Name	ClearCurve <sup>®</sup> ZBL	SMF-28 <sup>®</sup> Ultra fiber
Fiber Category	G.657.B3/G.652.D	ITU-T G.657.A1
Fiber Code	U	Z
Performance Option Code	01	01
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.4/0.4/0.3	0.4/0.4/0.3
Typical Attenuation* (dB/km)	0.35/0.35/0.20	0.33/0.33/0.19

\* For more information on typical attenuation please see the Corning whitepaper at [http://csmedia.corning.com/opcomm//Resource\\_Documents/whitepapers\\_rl/LAN-1863-AEN.pdf](http://csmedia.corning.com/opcomm//Resource_Documents/whitepapers_rl/LAN-1863-AEN.pdf)

\*\* SMF-28<sup>®</sup> Ultra fiber delivers up to 10x better macrobend loss performance compared to the G.652.D standard and up to 33 percent better macrobend loss performance than the G.657.A1 standard for 10mm radii bends.

## Ordering Information | Note: Contact Customer Care at 1-800-743-2675 for other options.



- 1** Select fiber count.  
002 = 2 fiber    008 = 8 fiber  
004 = 4 fiber    012 = 12 fiber  
006 = 6 fiber    024 = 24 fiber

- 2** Defines fiber type.  
U = ClearCurve<sup>®</sup> ZBL (OS2)  
Z = SMF28<sup>®</sup> Ultra fiber (OS2)

- 3** Select cable construction.  
T = MIC<sup>®</sup> 250 2.0  
D = 3.0mm MIC<sup>®</sup> 250

- 4** Defines outer jacket.  
F = Indoor/Outdoor riser

- 5** Select number of copper conductors.  
2 = 2 conductors  
4 = 4 conductors  
6 = 6 conductors  
M = 12 conductors

- 6** Defines unit of measure.  
1 = Feet  
2 = Meter

- 7** Select cable construction.  
Z = MIC<sup>®</sup> 250 2.0 with 20 AWG  
Y = MIC<sup>®</sup> 250 2.0 with 16 AWG  
X = 3.00mm MIC<sup>®</sup> 250 with 14 AWG  
W = 3.00mm MIC<sup>®</sup> 250 with 12 AWG

- 8** Defines performance option code.  
01 = Single-mode, OS2  
(Max. attenuation 0.4/0.4/0.3 dB/km)

- 9** Defines cable construction.  
M = Hybrid (composite) cable

- 10** Defines print code.  
A1 = Interlocking armored

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## Notes



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