

# FREEDM™ Gel-Free Indoor/Outdoor Cable

4F E9/125 SMF-28® Ultra

CORNING

FREEDM™ gel-free MPC (Multipurpose Cables) can be deployed both indoor and outdoor for campus backbone and building backbone (riser) cabling as well as for the cabling between floor distributors. The innovative dry, gel-free design with water-blocking technology eliminates the need for traditional flooding compound, providing more efficient and craft-friendly cable preparation. The cables can be installed in conduits, ducts and be buried directly in the ground.

## Features and Benefits

### Dry, gel-free tube

Needs minimal cleaning, saving about 20 minutes per fan-out (12 fibres), splicing is made faster and more accurate, resulting in reliable, consistently low-loss terminations

### All-dielectric cable construction

Requires no grounding or bonding

### Laminated swelling glass yarns

Improved rodent resistance and longitudinal water protection

### UV- and microbe-resistant

Can be installed in ducts or conduits

### Small diameter and bend radius

Easy installation in space-constrained areas

### Fibres colour coding to Telcordia-Bellcore

Easy identification of the individual fibres

### Waterblocking technology

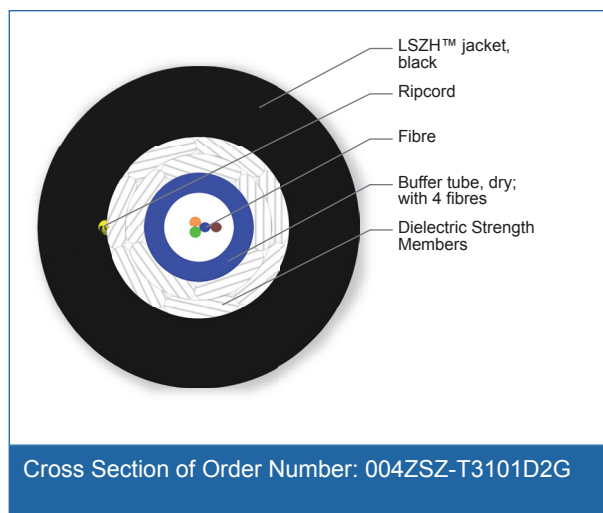
OSP (outdoor) applications

### Silicon-free outer jacket

The cable jacket is free of harmful to paint structures

### Flame retardant

LSZH™/FRNC



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## Standards

<b>Flame Test Method</b>	Flame retardant to IEC 60332-1-2 (single cable); IEC 60332-3-24 (bunch of cables) Reaction to fire according to EN 50575 and EN 13501-6 Low Smoke to IEC 61034 Non Corrosive to IEC 60754-2
<b>Waterblocking</b>	IEC 60794-1-2F5

## Specifications

General Specifications	
Environment	Indoor/Outdoor Universal Cable
Application	Aerial, Direct Buried, Duct, General Purpose Horizontal
Cable type	Loose Tube
Product type	Dielectric armour
Flame rating	LSZH™/FRNC
Reaction to fire	Dca,s2,d2,a1
Fibre Category	SMF-28® Ultra fibre

Temperature Range	
Installation and assembly	-10 °C to 60 °C
Operation	-30 °C to 70 °C
Storage	-30 °C to 70 °C

Cable Design	
Fibre count	4
Fibre colouring	Blue, orange, green, brown
Fibres per tube	4
Number of tube positions	1
Tensile Strength Elements and/or Armouring - Layer 1	Dielectric strength members
Tensile strength elements and/or armouring - Layer 2	Water-swellaible dielectric strength members
Number of ripcords	1

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## Cable Design

Outer jacket material	Flame-retardant, non-corrosive/low-smoke, zero-halogen (FRNC/LSZH) material
Outer jacket colour	Black

## Mechanical Characteristics Cable

Weight	42 kg/km
Nominal Outer Diameter	6.6 mm
Max. tensile strength, short-term	1000 N
Max. Tensile Strength, Long-Term	300 N
Min. Bend Radius Installation	99 mm
Min. Bend Radius Operation	66 mm

## Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2011/65/EU
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## Fibre Specifications

### Optical Characteristics (cabled)

Fibre name	SMF-28® Ultra fibre
Fibre Category	ITU-TG.657.A1
Fibre code	Z
Performance Option Code	01
Wavelengths	1310 nm / 1383 nm / 1550 nm
Maximum attenuation	0.4 dB/km / 0.4 dB/km / 0.3 dB/km
Typical attenuation	0.33 dB/km / 0.33 dB/km / 0.19 dB/km

\* 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)

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## Ordering Information

Part Number	004ZSZ-T3101D2G
Product Description	FREEDM™ Gel-Free Indoor/Outdoor Cable 4F E9/125 SMF-28® Ultra, Dca,s2,d2,a1



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