



✗ Water resistant & UV resistant

✗ Duct grade - Rodent resistant

✗ Sequentially metre marked

✗ Cut to length service

✗ Euroclass Eca

✗ 25 Year system warranty

✗ CIBSE TM65 Embodied Carbon: 1.612 kg CO<sub>2</sub>e

## Product Overview

Enbeam OS2 Singlemode SWA Direct Burial Fibre Optic Cable Loose Tube 48 Core 9/125 Eca Black, part of a huge range of OS2 fibre optic cables fully stocked at Mayflex.

Excel steel wire (SWA) OS2 9/125 µm armoured loose tube optical fibre cables have been designed specifically for direct burial and the most demanding of installations.

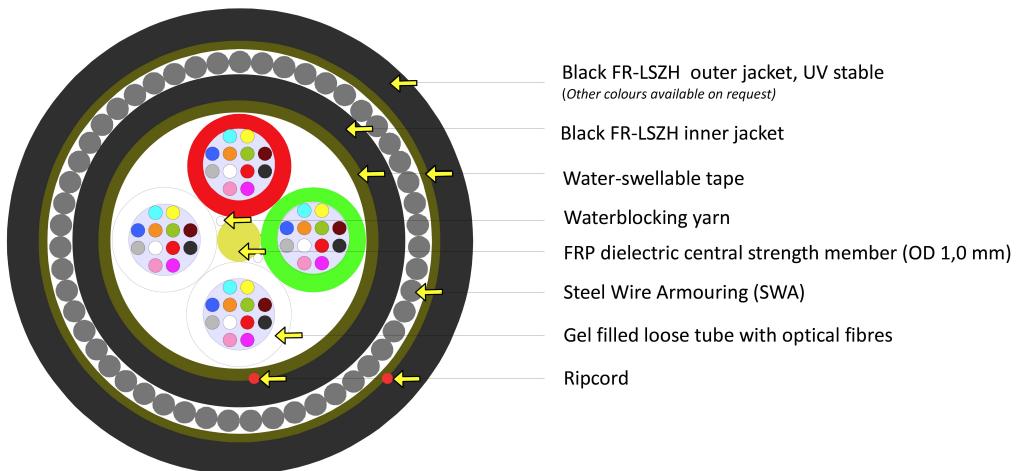
These cables are constructed from standard single loose tube cables which are then packed into a flexible but strong fibreglass water blocking strength member. An internal sheath with a rip cord is inserted with lengths of steel wire armouring over the top and then an oversheath is added providing a strong but flexible cable assembly.

## Product Specifications

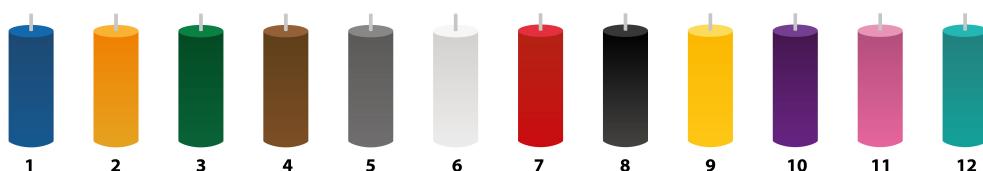
| Feature                   | Values                          |
|---------------------------|---------------------------------|
| Number of Cores           | 48                              |
| Type of tube              | Loose tube                      |
| Number of fibres per tube | 12                              |
| Fibre type                | Single mode 9/125               |
| Category                  | OS2                             |
| Rodent resistant          | yes                             |
| Outer sheath material     | Copolymer, thermoplastic (LSOH) |

|  |         |
|--|---------|
| Outer sheath colour                            | Black   |
| Flame retardant according to IEC 60332-1-2     | yes     |
| Reaction-to-fire class according to EN 13501-6 | Eca     |
| Outer diameter approx.                         | 13.2 mm |

### Cross-section diagram



### Colour coding (as per TIA-598-C)



For fibre core counts above 12 the colour sequence is repeated with the addition of a mark every 70mm for cores 13-24 and two marks for 25-36 and so on.

### Cable specifications

| Features                             | Values  |
|--------------------------------------|---|
| Strength members                     | Waterblocking yarn + FRP dielectric central strength member (OD 1.00mm) |
| Max. tensile strength (installation) | 4000 N  |
| Max. tensile strength (installed)    | 1000 N  |

|                                  |                              |
|----------------------------------|------------------------------|
| Crush resistance (installation)  | 2000 N                       |
| Crush resistance (installed)     | 1500 N                       |
| Impact resistance                | 25 Nm                        |
| Temperature range (installation) | -15 °C a +50 °C              |
| Temperature range (installed)    | -40 °C a +70 °C              |
| Temerature range (storage)       | -30 °C a +70 °C              |
| Weight (48 core)                 | Approx. 317 kg/km            |
| Minimum bend radius (unloaded)   | 20x cable OD                 |
| Minimum bend radius (loaded)     | 10x cable OD                 |
| Tube diameter (48 Core)          | 2,3 mm                       |
| Steel Wire Armouring             | Soft zinc coated steel wires |
| Sheath thickness                 | Typical 1,4 mm               |
| Number of ripcords               | 2                            |

## Fibre specifications

| Features                         | Values          |
|----------------------------------|-----------------|
| Mode Field diameter              | 9.2 +/- 0.4µm   |
|                                  | at 1310nm       |
|                                  | 10.1 +/- 0.5µm  |
|                                  | at 1550nm       |
| Cladding diameter                | 125.0 +/- 0.7µm |
| Primary Coating diameter         | 242 +/- 7µm     |
| Max. attenuation                 | 0.40 dB/km      |
|                                  | at 1310nm       |
|                                  | 0.25 dB/km      |
|                                  | at 1550nm       |
| PMD                              | 0.2 ps/km       |
| Cut-off wavelength               | 1260nm          |
| Chromatic Dispersion coefficient | 3 ps/km.nm      |
|                                  | at 1285-1330nm  |
|                                  | 18 ps/km.nm     |
|                                  | at 1550nm       |
|                                  | 22 ps/km.nm     |
|                                  | at 1625nm       |
| Zero dispersion wavelength       | 1300-1322 nm    |
| Refractive Index                 | 1.467           |
|                                  | at 1310nm       |
|                                  | 1.468           |
|                                  | at 1550nm       |
| Construction                     | ITU G.652.D     |

## Standards

| Applicable Standard                        | Subject   |
|--|---|
| IEC 60332-1-2:2004                         | Tests on electric and optical fibre cables under fire conditions. Test for vertical flame propagation for a single insulated wire or cable. Procedure for 1 kW pre-mixed flame  |
| IEC 60754-2:2014+A1:2020                   | Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity  |
| IEC 61034-2:2005+A2:2020                   | Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements   |
| IEC 60793-1-1:2022                         | Optical fibres - Part 1-1: Measurement methods and test procedures - General and guidance   |
| IEC 60793-1-20:2014                        | Optical fibres - Part 1-20: Measurement methods and test procedures - Fibre geometry  |
| IEC 60793-1-21:2001                        | Optical fibres - Part 1-21: Measurement methods and test procedures - Coating geometry  |
| IEC 60793-1-22:2001                        | Optical fibres - Part 1-22: Measurement methods and test procedures - Length measurement  |
| IEC 60793-1-30:2010                        | Optical fibres - Part 1-30: Measurement methods and test procedures - Fibre proof test  |
| ITU G.652.D                                | Characteristics of a single-mode optical fibre and cable  |
| EN 50173-1:2018                            | Information technology. Generic cabling systems - General requirements  |
| EN 50575: 2014 + A1: 2016                  | Power, control and communication cables — Cables for general applications in construction works subject to reaction to fire requirements  |
| EN 50399:2011+A1:2016                      | Common test methods for cables under fire conditions. Heat release and smoke production measurement on cables during flame spread test. Test apparatus, procedures, results     |
| ISO/IEC 11801-1:2017                       | Information technology - Generic cabling for customer premises: Part 1 General Requirements   |
| ANSI/TIA 568-3.D                           | Optical Fiber Cabling and Components Standard   |
| ANSI/TIA/EIA 598-D                         | Optical Fibre Cable Colour Coding   |
| RoHS-II/-III (2011/65/EU & 2015/863): 2023 | Our products, demonstrate full adherence to the regulatory stipulations of the EU Directive 2011/65/EU (RoHS-II) and its corresponding delegated directive 2015/863 (RoHS-III). |
| WFD: 2023                                  | Compliant to Waste Framework Directive  |

|                        |   |
|------------------------|---|
| SCIP: 2023             | Compliant - Does Not Contain Substances of Concern In articles as such or in complex objects (Products) |
| POPs (EU) No 2019/1021 | EU Regulation for the restriction of Persistent Organic Pollutants.                                     |

### Part Number Table

| Part Number | Description   |
|-------------|---|
| 205-363     | Excel Enbeam OS2 SWA Direct Burial Fibre Optic Cable Loose Tube 48 Core Eca Black |

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