





#### **Product Overview**

Excel SWA Armoured fibre optic cables are constructed around silica gel filled tube(s) containing 12 colour coded 250 micron 9/125µm Singlemode fibres, covered with water blocking tape followed by an internal jacket of fire retardant low smoke zero halogen material. Lengths of steel wire armouring are then applied plus and additional layer of water blocking tape and over sheathed with a UV stable fire retardant low smoke zero halogen jacket.

The print legend on the cable now includes information regarding the DOP number, Test and Classification of the cable for traceability.

#### **Product Specifications**

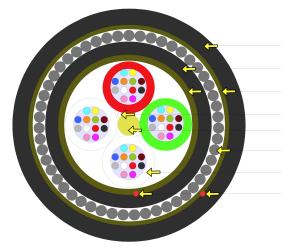
Feature	Values
Number of Cores	48
Type of tube	Loose tube
Number of fibres per tube	12
Fibre type	Single mode 9/125
Category	OS2
Armouring	Yes
Rodent resistant	Yes
Outer sheath material	Copolymer
Outer sheath colour	Black

# Item Code: 205-363



Reaction-to-fire class according to EN 13501-6	Eca
Halogen free (acc. EN 60754-1/2)	Yes
Flame retardant	In accordance with EN 50399
Outer diameter approx.	13.2 mm

### **Cross-section diagram**



Black FR-LSZH outer jacket, UV stable (Other colours available on request)

- Black FR-LSZH inner jacket
- Water-swellable tape
- Waterblocking yarn
- FRP dielectric central strength member (OD 1,0 mm)
- Steel Wire Armouring (SWA)
- Gel filled loose tube with optical fibres
- Ripcord

## **Cable specifications**

Features	Values
Strength members	Waterblocking yarn + FRP dielectric central strength member (OD 1.00mm)
Max. tensile strength (installation)	4000N
Max. tensile strength (installed)	1000N
Crush resistance (installation)	2000N
Crush resistance (installed)	1500N
Impact resistance	25 Nm
Temperature range (installation)	-15° to +50°C
Temperature range (installed)	-40° to +70°C
Temerature range (storage)	-30° to +70°C
Weight (48 core)	Approx. 317kg/km
Minimum bend radius (unloaded)	20x cable OD
Minimum bend radius (loaded)	10x cable OD



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Tube diameter (48 Core)	2.3mm
Steel Wire Armouring	Soft zinc coated steel wires
Sheath thickness	Typical 1.4mm
Number of ripcords	2

## **Fibre specifications**

Features		Values
Mode Field diameter	at 1310nm	9.2 +/- 0.4µm
	at 1550nm	10.1 +/- 0.5µm
Cladding diameter		125.0 +/- 0.7µm
Primary Coating diameter		242 +/- 7μm
Max. attenuation	at 1310nm	0.40 dB/km
	at 1550nm	0.25 dB/km
PMD		0.2 ps/km
Cut-off wavelength		1260nm
Chromatic Dispersion coefficient	at 1285-1330nm	3 ps/km.nm
	at 1550nm	18 ps/km.nm
	at 1625nm	22 ps/km.nm
Zero dispersion wavelength		1300-1322 nm
Refractive Index	at 1310nm	1.467
	at 1550nm	1.468
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 60754-2:2011	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity

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IEC 61034-2:2005+A1:2013	Measurement of smoke density of cables burning under defined conditions – Part 2: Test procedure and requirements
IEC 60793-1-1:2017	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 50173-1:2011	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	Restriction of Hazardous Substances - Compliant

# **Part Number Table**

Part Number	Description
205-363	Enbeam OS2 Singlemode 9/125 48 Core Armoured SWA Fibre Optic Cable Loose Tube Eca - Black

Excel is a world class premium performing end to end infrastructure solution designed, Manufactured, supported and delivered without compromise.



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