



**Reference:** 13117546  
**EAN 13:** 3427580850301

### CONTACT

Markets and Products Information  
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## SHIELDED HIGH TEMPERATURE EXTRA-FLEXIBLE POWER CABLES

FLAMEX® EN 50382-2 FFXS shielded power cables are designed with extra flexible conductors as per jumper cables. They are used for installations where enhanced electrical screening (EMC) is required. Able to withstand higher operating temperatures, these silicone-based cables allow to save cable weight.

### STANDARDS

**Product** EN 45545-2 (HL3); EN 50382-2; IEC 60228

### Application

These cables are designed and dedicated to be used on rolling stock equipment where high temperature is required to save cable weight.

Thanks to its high flexibility, these cables are frequently installed on locomotive equipment with low bending radius.

### Construction

- **Conductor**  
 Extra flexible class 6 copper according to IEC 60228  
 \* tinned copper for 120°C Class  
 \* plain copper for 150°C Class
- **Insulation**  
 Cross-linked silicone type EI 111 according to EN 50382-1
- **Separator**  
 Unweaved tape
- **Screen**  
 Tinned copper wire braid
- **Separator**  
 Unweaved tape
- **Outer sheath**  
 Cross-linked silicone type EM 107 according to EN 50382-1  
 Colour: black outer layer

### Marking

FLAMEX SI - EN 50382-2 - Voltage rate (1800V or 3600V) - cross-section mm<sup>2</sup> - FFXS - temperature class (120°C or 150°C) - NEXANS 279 - week/year

### Guide to use

Cabling rules are given according to EN 50343

- Minimum bending radius (static) : 4 x outer cable diameter
- Minimum bending radius (dynamic) : 6 x outer cable diameter
- Pulling tensible force (dynamic) during installation : 50 N/mm<sup>2</sup> of copper size
- Mechanical (static) tensible force : 15N/mm<sup>2</sup> of copper size
- Permissible current carrying capacities : value and calculation method are given in EN 50355



Conductor flexibility  
**Extra-flexible**  
 class 6



Halogen free  
 EN 60754-1 & EN 60684-2



Rated Voltage U<sub>o/U</sub>  
 (Um)  
 1.8 / 3 (3.6) kV



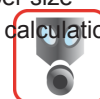
Flame retardant  
 EN IEC 60332-1-2



Fire retardant  
 EN IEC 60332-3-24  
 (cat C); EN IEC 60332-3-25



Smoke density  
 EN/IEC 61034-2



Gases toxicity  
 EN 50305-9.2



Operating temp.  
 -50 ... 120 °C

### Standards

Construction according to EN 50382-2

**CHARACTERISTICS****Construction characteristics**

Conductor material	Tin plated copper
Conductor flexibility	Extra-flexible class 6
Insulation	High temperature silicone
Screen	Tinned copper braid
Outer sheath	High temperature silicone
Halogen free	EN 60754-1 & EN 60684-2

**Dimensional characteristics**

Conductor cross-section	120 mm <sup>2</sup>
Conductor diameter	14.4 mm
Braid section	10 mm <sup>2</sup>
Nominal outer diameter	23.3 mm
Minimum outer diameter	22.3 mm
Maximum outer diameter	25.0 mm
Approximate weight	1346 kg/km

**Electrical characteristics**

Rated Voltage U <sub>o</sub> /U (U <sub>m</sub> )	1.8 / 3 (3.6) kV
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**Usage characteristics**

Flame retardant	EN 60332-1-2
Fire retardant	EN IEC 60332-3-24 (cat C); EN IEC 60332-3-25 (EN50305)
Smoke density	EN/IEC 61034-2
Gases toxicity	EN 50305-9.2
Operating temperature, range	-50 ... 120 °C
Electro magnetic interference resistance	Yes
Max. conductor temperature in service	120 °C
Overload maximum core temperature	140 °C
Chemical resistance	Good