



### CONTACT

Markets and Products Information  
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## SHEATHED HIGH TEMPERATURE FLEXIBLE POWER CABLES

FLAMEX® EN 50382-2 FF power cables are designed and dedicated to be used on rolling stock equipment where high operating temperature is required to save cable weight. These sheathed products offer better mechanical protection. Thanks to its high flexibility, these cables with low bending radius are frequently installed on locomotive equipment.

### STANDARDS

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

### DESIGN

#### 1. Conductor

Flexible class 5 copper according to IEC 60228  
 - tinned copper for 120°C Class  
 - plain copper for 150°C Class  
 Separator: Unweaved tape

#### 2. Insulation

Cross-linked silicone type EI 111 according to EN 50382-1

#### 3. Outer sheath

Cross-linked silicone type EM 107 according to EN 50382-1  
 Colour: black outer layer

Example of marking: FLAMEX SI - EN 50382-2 - Voltage rate (1800V or 3600V) - cross-section mm<sup>2</sup> - FF - temperature class (120°C or 150°C) - LYNXEO 279 - week/year

### GUIDE TO USE

- Cabling rules are given in EN 50343 and EN 50355
- Permissible current carrying capacities: values and calculation method are given in EN 50343
- Bending radius:
  - Static use: 4 x outer cable diameter
  - For installation and occasional movements: 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



Conductor flexibility  
Flexible class 5



Halogen free  
EN 60754-1 & EN 60684-2



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 temp.  
-50 ... 120 °C



Max. conductor temp. in service  
120 °C

### CHARACTERISTICS

#### Construction characteristics

Conductor material	Tin plated copper
Conductor flexibility	Flexible class 5
Insulation	High temperature silicone
Outer sheath	High temperature silicone
Halogen free	EN 60754-1 & EN 60684-2

#### 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
Max. conductor temperature in service	120 °C
Overload maximum core temperature	140 °C
Chemical resistance	Good



Conductor flexibility  
Flexible class 5



Halogen free  
EN 60754-1 & EN 60684-2



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 temp.  
-50 ... 120 °C



Max. conductor temp. in service  
120 °C

## FLAMEX SI EN 50382-2 FF 1800V 120°C

Reference	Cross section [mm <sup>2</sup> ]	Conductor diam. [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
10260587	50	9.2	15.0	17.5	620
10260586	70	11.0	16.8	19.7	840
10198407	95	12.5	19.0	22.2	1097
10260585	120	14.2	20.8	24.3	1355
10198408	150	15.8	22.3	26.1	1620
10260584	185	17.5	24.5	28.6	1993
10217649	240	20.1	27.1	31.7	2514

## FLAMEX SI EN 50382-2 FF 3600V 120°C

Reference	Cross section [mm <sup>2</sup> ]	Conductor diam. [mm]	Min. outer diam. [mm]	Max. outer diam. [mm]	Approx. weight [kg/km]
10211468	50	9.2	17.5	20.6	715
10211469	70	11.0	19.2	22.4	936
10211470	95	12.5	20.8	24.3	1176
10211471	120	14.2	22.4	26.2	1428
10211472	150	15.8	24.1	28.2	1712
10211473	185	17.5	26.4	30.9	2106
10211474	240	20.1	29.4	34.4	2667