



CONTACT

Markets and Products Information
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HIGH TEMPERATURE FLEXIBLE POWER CABLES

FLAMEX® EN 50382-2 F power cables are designed and dedicated to be used on rolling stock equipment where high operating temperature is required to save cable weight. 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

Colour: black outer layer

Example of marking: FLAMEX SI - EN 50382-2 - Voltage rate (1800V or 3600V) - cross-section mm² - F - 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/mm² of copper size
- Mechanical static tensible force: 15N/mm² of copper size



Conductor flexibility
Flexible class 5



Halogen free
EN 60754-1 & EN 60684-2



Rated Voltage U₀/U
(Um)
3.6 / 6 (7.2) kV



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

CHARACTERISTICS**Construction characteristics**

| | |
|-----------------------|---------------------------|
| Conductor material | Plain copper |
| Conductor flexibility | Flexible class 5 |
| Insulation | High temperature silicone |
| Halogen free | EN 60754-1 & EN 60684-2 |

Dimensional characteristics

| | |
|-------------------------|---------------------|
| Conductor cross-section | 300 mm ² |
| Conductor diameter | 22.5 mm |
| Nominal outer diameter | - mm |
| Minimum outer diameter | 27.7 mm |
| Maximum outer diameter | 32.4 mm |
| Approximate weight | 2800 kg/km |

Electrical characteristics

| | |
|---|------------------|
| Rated Voltage U _o /U (U _m) | 3.6 / 6 (7.2) kV |
|---|------------------|

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 | 150 °C |
| Overload maximum core temperature | 170 °C |
| Chemical resistance | Good |
| Fire load | - kWh/m |