



General Information

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1. Construction

- 1.1. Conductor:** Tinned stranded copper: 6 mm² or AWG 8
- 1.2. Semi-conducting layer:** avoids local overstress of the HV insulation ("smooth electrical field")
- 1.3. HV insulation:** Type B: use of EPR
Type C: use of XLPE
- 1.4. Semi-conducting layer:** avoids local overstress of the HV insulation ("smooth electrical field")
- 1.5. Shielding:** improves electrical, mechanical and environmental behaviour
- 1.6. Outer jacket:** use of PE with optional incorporated ants and termites repellent compound

2. Characteristics of the different cable constructions

2.1. HV Insulation

The most appreciated insulation material is XLPE (cross-linked Polyethylene). This material has excellent mechanical and electrical characteristics; it resists very well to moisture, acids and/or alkaline.

Another excellent insulation material is EPR (Ethylene-Propylene rubber). This synthetic rubber has excellent mechanical and electrical characteristics; cables insulated with this material are more flexible in comparison with XLPE insulated cables.

2.2. Screen

It is recommended to equip the airfield lighting cables with a screen.

The reasons are :

- Uniformisation of the electrical field and, as consequence, a longer lasting of the HV insulation
- Protection against lightning
- Protection against electrical hazards for the personnel
- Easier fault location
- Possibility of testing the outer jacket (jacket fault location)
- Mechanical protection against rats, mice and termites

The screen can consist of a copper **braid** or a **copper** or **brass tapes**.

All of the versions have the mentioned features; the tapes are more effective against mice and rats than a braid.

2.3. Outer sheath

The best cable sheath for use with high environmental strain is PE (Polyethylene).

This material has excellent characteristics: moisture, acid, alkaline, oil (kerosene) resistance is good or excellent.

3. Features

- Excellent UV resistance (black coloured outer sheath)
- Optionally a chemical repellent for ants and termites, acting over a long period of time can be added.
- EUPEN cables are resistant to the deicers of the new generation currently used on airports: Potassium Acetate (Kca), Potassium Formate (KF).

