

Features of insulation materials

AXON' EQUIPMENT WIRES ARE MAINLY INSULATED WITH FLUOROPOLYMER MATERIALS LIKE

PTFE (Polytetrafluoroethylene),

ETFE (Ethylenetetrafluoroethylene)

and **FEP** (Fluoroethylene Propylene)

or with **POLYIMIDE** materials.

The fluoropolymer materials characteristics are:

- Resistance to high temperatures,
- Chemical inertness,
- Excellent ageing,
- Tenacity,
- Excellent dielectric properties,
- Negligible humidity absorption,
- Good resistance to atmospheric exposure.

The production process used differs according to the materials:

PTFE presented in the form of powder is worked using a discontinuous extrusion process,

PTFE tapes use a continuous taping process.

ETFE and **FEP** are thermoplastic materials in the form of granules and use a continuous extrusion process.

For the **POLYIMIDE** insulated wires, AXON' uses **POLYIMIDE** tapes with a **FEP** coating for heat sealing. These tapes are worked using a continuous taping process. A **FEP** or **PTFE** lacquer is added for colouration. AXON' also offers equipment wires with **POLYIMIDE** and **PTFE** tapes. These products are mainly used for applications where the risk of arc tracking has to be avoided.

The following table summarises the main mechanical, thermal and electrical properties of the different insulation materials.