

# Chapter 3 Composite Insulator Material

3.2.2 Fiberglass Rod Raw Material

**By Orient Power** 

### Fiberglass Rod Raw Material







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## Fiberglass rod raw material for composite insulator :

- Fiberglass and resin-based matrix
- The core usually consists of fiberglass which is positioned in a resin-based matrix in such a manner as to achieve maximum tensile strength.

### Fiberglass:

- The basic raw materials for fiberglass are a variety of natural minerals and manufactured chemicals.
- The major ingredients are silica sand, limestone, and soda ash. Other ingredients may include calcined alumina, borax, feldspar, nepheline syenite, magnesite, and kaolin clay, among others.

#### Epoxy resins:

- Epoxy resins are an important class of polymeric materials, characterized by the presence of more than one three-membered ring known as the epoxy, epoxide, oxirane, or ethoxyline group.
- The applications for epoxy-based materials are extensive and include coatings, adhesives and resin matrices for composite materials such as those using carbon fiber and fiberglass reinforcements (although polyester, vinyl ester, and other thermosetting resins are also used for glass-reinforced plastic).