

Electrical conducting material are the basic requirement for electrical engineering products. The electrical conducting material can be classified as below-

Based on Resistivity or Conductivity

- Low **resistivity** or high conductivity conducting material
- High resistivity or Low conductivity conducting material

A classification chart of conducting materials based on resistivity or conductivity is shown in figure below-

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Electrical Conducting Materials

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graph TD; A[Electrical Conducting Materials] --> B[Low resistivity/ high conductivity conducting material]; A --> C[High resistivity/ low conductivity conducting material];
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Low resistivity/ high conductivity conducting material

High resistivity/ low conductivity conducting material

**Low Resistivity or High
Conductivity Conducting
Material**

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Material having low resistivity or high conductivity are very useful in electrical engineering products.

These material used as **conductors** for all kind of windings required in electrical machines, apparatus and devices. These material are also used as **conductor** in transmission and distribution of electrical energy.

Some of low resistivity or high conductivity materials and their resistivity are given in table below –

- Silver
- Copper
- Gold
- Aluminum

High Resistivity or Low Conductivity Conducting Material

Materials having High resistivity or Low conductivity conducting are very useful for electrical engineering products. These material are used to manufacture the filaments for incandescent lamp, heating elements for electric heaters, space heaters and electric

heaters, space heaters and electric irons etc.

Some of materials having High resistivity or Low conductivity are listed below:

- Tungsten
- Carbon
- Nichrome or Brightray – B
- Nichrome – Vor Brightray – C
- Manganin