

## What is Conductive Paint?

Conductive paint also be known as conductive ink. Conductive paint is a kind of conductive composite material, in which conductive particles are dispersed evenly in the liquid solvent. Conductive paint is compose of carbon powder, gold powder, silver powder or copper power mixing with the liquid resin. When the liquid is dry and solidified, the distances between conductive particles are shortened, so the free particles move in the direction of external electric field to form the electric current. Conductive paint are widely used in integrated circuit, PCB, RFID, and silicone rubber keypad.

### Types of Conductive Paint

The conductive paint includes inorganic conductive paint and organic conductive paint.

#### 1.Inorganic Conductive Paint

##### 1) Gold Conductive Paint

Gold conductive paint is infused with gold powder. Its chemical properties are very stable with extreme low resistance, oxidation resistance, and corrosion resistance, But it is very expensive.

##### 2) Silver Conductive Paint

This conductive paint stability and conduction is next gold conductive paint. However, silver conductive paint is allergic to the temperature. The higher the temperature, the lower the resistance is. Silver conductive paint

is usually applied to conduction printing of membrane switch.

### 3) Copper Conductive Paint

Copper conductive paint is one of the most widely conductive ink nowadays. Though copper conductive ink has good conduction and low price, its anti-oxygen property is worse than gold and silver conductive paint. So the copper conductive paint should be mixed with the organic phosphorus compounds, antioxidant to reinforce the stability. Copper conductive paint is mainly used in printed circuit and electromagnetic shielding products.

### 4) Nickle Conductive Paint

Nickle conductive paint is more economical than the above paints. But the conductive property is not so good as the above conductive paints. It is easy to be oxidized. It is generally used in electromagnetic shielding products.

### 5) Carbon & Graphite Conductive Paint

The resistance of carbon conductive paint differ from its different infused carbons. The resistance is higher than the metal conductive paint, and it cannot resist the wet.

## **2. Organic Conductive Paint**

Organic conductive paint is now on researching stage. It would take more time to go into market.