



Copper is a widely used metal with distinct characteristics that make it valuable in a variety of industries. Here are the main properties of copper:

BENEFITS of COPPER:

• Excellent Electrical and Thermal Conductivity

Copper's ability to conduct electricity and heat efficiently is unmatched by most other metals. This makes it the go-to material for electrical wiring, circuits, and electrical equipment. It's also used in heat exchangers, radiators, and cooking utensils, where efficient heat transfer is important.

• Corrosion Resistance

Copper naturally forms a protective layer of copper oxide (patina) when exposed to air and moisture, which helps it resist corrosion. This makes it ideal for outdoor and marine applications, such as plumbing, roofing, and electrical systems, where resistance to weathering is essential.

• Antimicrobial Properties

Copper has natural antibacterial and antifungal properties, which make it effective at killing harmful bacteria and viruses. This is especially beneficial for medical equipment, high-touch surfaces (e.g., doorknobs, handrails), and hygiene-focused environments, as it helps reduce the spread of germs.

• Recyclability

Copper is 100% recyclable without any loss in quality. Recycling copper saves energy, reduces waste, and minimizes the need for mining new copper ore, making it a sustainable material choice.

• Durability and Longevity

Copper is a durable metal that can withstand years of wear and tear. It doesn't rust like iron, and its resistance to corrosion and physical wear means that products made from copper can last a long time, reducing the need for frequent replacements.

• Aesthetic Appeal

Copper's rich, reddish-brown color and its ability to develop a greenish patina over time make it aesthetically appealing. This makes it popular in decorative items such as jewelry, sculptures, roofing, and architectural features, adding beauty and character to projects.

APPLICATIONS for COPPER:

- **Industrial Identification**
 - Equipment and machinery ID tags
 - Asset tracking tags
 - Inventory or serial number plates
 - Valve and pipe markers
- **Electrical and Grounding Tags**
 - Grounding system labels
 - Electrical panel tags
 - Transformer or substation ID plates
- **Safety and Compliance Labels**
 - Inspection tags
 - Warning or instruction plates
 - Maintenance record tags
- **Architectural and Decorative**
 - Decorative plaques and signs
 - Historical or memorial markers
 - Artistic engraving plates
- **Awards and Custom Gifts**
 - Engraved nameplates for trophies or awards
 - Commemorative tags or plaques
 - Custom business or name badges
- **Outdoor Use**
 - Outdoor signage - forms a beautiful patina
- **Art and Jewelry**
 - Custom engraved nameplates for artworks
 - Jewelry backing tags
 - Craft labels or maker's marks

Contact us today to Quote your Copper Project

Toll Free: 1-800-451-3330

Local: 616-647-0998

www.NapTags.com

info@napindgroup.com

7777 Childsdale Ave NE | Rockford, MI 49341



CHARACTERISTICS of COPPER:

- **Excellent Electrical Conductivity**

Copper is one of the best conductors of electricity, second only to silver. This property makes it ideal for electrical wiring, connectors, and other electrical components.

- **Thermal Conductivity**

Copper is also an excellent conductor of heat. It's commonly used in heat exchangers, radiators, and cooking utensils because it efficiently transfers heat.

- **Sustainability**

Given its recyclability and long-lasting durability, copper is a sustainable material. Recycled copper accounts for a large portion of the copper used worldwide, reducing the need for mining new copper ore.

- **Corrosion Resistance**

Copper naturally resists corrosion due to the formation of a protective patina (greenish layer of copper oxide) when exposed to air and moisture. This makes copper ideal for outdoor and marine applications, like roofing and plumbing.

- **Non-magnetic**

Copper is non-magnetic, which makes it useful in applications where magnetic properties could interfere with the functionality of the device, such as in some electronic components.

- **Antibacterial Properties**

Copper has natural antimicrobial properties, meaning it can kill or inhibit the growth of bacteria and viruses on its surface. This makes it useful in medical devices, door handles, and other high-touch surfaces.

- **Color and Appearance**

Copper has a distinct reddish-brown color that can develop a greenish patina over time due to oxidation. The unique color and appearance are often used in decorative applications like jewelry, coins, and sculptures.

- **Strength**

Copper is relatively strong, though not as hard as some other metals like steel. It can be alloyed with other metals, like zinc (to form brass) or tin (to form bronze), to increase its strength.

- **Recyclability**

Copper is 100% recyclable without losing any of its properties. This makes it an environmentally-friendly material that can be reused in a variety of applications without degradation in quality.

- **Heat Expansion**

Copper has a moderate coefficient of thermal expansion. It expands and contracts with temperature changes, but not excessively, making it reliable for applications where temperature fluctuations occur.

