Copper and Copper Alloys: Their Numerous Applications

by Lawrence Halter

Article published on May 23rd 2012 | Business

Copper and its numerous alloys constitute one of the major groups of industrial metals. They are widely used because of their excellent thermal and electrical conductivity, ease of fabrication, and outstanding resistance to corrosion. Couple these with good strength, fatigue resistance, and non-magnetic properties, youâ€™ve got yourself a material that has many uses.

Copper can be readily brazed, meaning it can easily be hardened by joining it with other metals. For decorative purposes, standard copper alloys in specific colors are readily available. In addition, copper alloys can be buffed and polished to almost any desired luster and texture. They can also be coated, plated, or chemically colored.

Copper and its alloys are relatively good conductors of heat and electricity. In fact, copper is used for these purposes more than any other metal. Although the addition of other metals to copper invariably decreases its electrical conductivity and its thermal conductivity, it does offer its advantages when used in various applications.

Pure copper is used extensively for electrical purposes, including cables and wires, contacts, and a wide variety of other parts that require the conduction of electrical current. Copper alloys like brasses, bronzes, and cupronickels are used extensively for heat exchangers, vehicle radiators, home heating systems, solar panels, and other heat-conducting applications. Because of their great capability to resist corrosion, copper alloys are also used in valves, pipes, and fittings in systems that carry, deliver, and process water and other fluids.

Copper can be pressed into sheets of various thickness, depending on how it will be used. Copper sheets that are .016 inches thick or more can be used for jewelry-making, sculptures, oven hoods as well as roofing materials. Those that are .010 inches thick or less are used for flashing, capping poles or exposed beams in a structure, and various garden projects.

A copper sheet can also be as thin as .001 inches. This makes a very thin copper foil. It is approximately 1.5 times thicker than your average household aluminum foil and is easy to cut, and like aluminum foils, is also easy to wrinkle. You can tear a copper foil with your hands or punch out various shapes with paper punchers. Copper that is .001 inch thick is often used for paper crafts and scrapbooking, as well as electrical, manufacturing, and research and development applications.

The Muntz metal is another popular type of copper alloy, and itâ€™s heavily used in the shipping industry. It is named after its inventor, George Fredrick Muntz, who developed the alloy in 1832 in Birmingham, England. You can learn more about it at wisegeek.com/what-is-muntz-metal.htm.

Article Source:
http://www.articleside.com/business-articles/copper-and-copper-alloys-their-numerous-applications.htm - Article Side

Lawrence Halter - About Author:
For more details, search a Copper sheets, a copper sheet and a Muntz metal in Google.

Article Keywords:

copper sheet, copper sheets, muntz metal

You can find more free articles on Article Side. Sign up today and share your knowledge to the community! It is completely FREE!