



More About Metal

Non-Ferrous Metals

The following metals are classified as “non-ferrous” metals meaning that they do not contain iron. At Beaducation we carry a variety of “non-ferrous” metals. All of these metals can be stamped, soldered and polished in the same way.

Nickel Silver

Melting Point 2030°. A metal alloy of copper (65%), nickel (18%) and zinc (17%). It is named for its silvery appearance and contains no elemental silver.

Sterling Silver

Melting Point 1640°. A metal alloy of silver (92.5%) and copper (7.5%). The addition of copper to silver makes it stronger. The copper in the alloy also causes sterling silver to tarnish. Firescale develops when heated with a torch.

Fine Silver

Melting Point 1762°. A pure metal. Fine silver is very soft. Appropriate for fusing. Does not tarnish or develop firescale when heated.

Copper

Melting Point 1981°. A pure metal. Copper is often alloyed with other metals for strength. Copper will tarnish.

Gold Filled

Melting Point 1945° (pure gold). Gold Filled metal has a layer of gold that is bonded onto a base metal, usually brass, by fusing. The standard is to clad the core with 10% (by weight) 12K or 14K gold. That means that 5% of the metal is pure gold and is stamped 1/20GF. Due to the fact that this material has a layer of gold over brass, more care must be taken when soldering and polishing so as not to expose the underlying base metal.

Temper

The malleability of metal is called “temper”. Metal and wire for jewelry comes in two tempers.

- Dead Soft Wire or Sheet has not been work-hardened and therefore is soft and easy to manipulate while fabricating or wire working. Wire and sheet stiffens when used, so most designs and wire wrapping are best done with dead soft material and will work harden when used. Pieces may be further work-hardened by hammering or tumbling.
- Half Hard Wire or Sheet is work-hardened to stiffen. Half hard is usually used when wire working and making loops or shapes that need to retain their shape without hammering or tumbling. If your sheet or wire becomes too work-hardened it may be annealed to soften and return it to a working temper. **Be sure to check out our FREE Annealing Metal Online Class at beaducation.com.**