

Metals Suitable for Enameling

Most metals can be enameled if the proper enamel is selected. Copper is the most common metal used by enamellers. This copper is pure copper, oxygen free, electrolytic and has high conductivity.

Fine silver is also popular. Sterling is almost equal to fine silver if depletion gilded prior to enameling. To do this anneal at 1350-1450°F for one minute. Pickle in Sparex No. 2 solution (sodium bisulfate or pH minus) or 5% sulfuric acid (5 parts acid, 95 parts water by volume). Repeat until no further oxidation or discoloration results when annealed.

The ideal metal for enameling is 24 karat gold; however, cost is a consideration. Normally, gold alloyed with silver and copper are used for enameling. As the percentage of gold decreases, more enameling experience is required. Enameling on white gold is more difficult.

Gilding metal, no longer sold by Thompson, is 95% copper and 5% zinc.

Steel with 0.002% or less carbon (low carbon steel) enamels as easily as copper. As the carbon content increases, much more enameling experience is required.

Other metals include cast iron, 400 series magnetic stainless steel and platinum. The 400 series stainless and platinum need to be enameled with the 5000 and 6000 series Thompson enamels.

Very detailed information on metals suitable for enameling can be found in the [Thompson Enamel Workbook](#), item TEP001.