



Brass, Copper & Bronze Alloy Designation

Metal Type	Alloy #	Description
Copper	Wrought 101 - 159 Cast 800 - 813	Metals which have a designated minimum copper content of 99.3% or higher.
High Copper Alloys	Wrought 160 - 199 Cast 814 - 832	For the wrought products, these are alloys with designated copper contents less than 99.3% but more than 96% which do not fall into any other copper alloy group. The cast high copper alloys have designated copper contents in excess of 94%, to which silver may be added for special properties.
Brass	Wrought 200 - 499 Cast 833 - 899	These alloys contain zinc as the principal alloying element with or without other designated alloying elements such as iron, aluminum, nickel and silicon. The wrought alloys comprise three main families of brasses: copper-zinc alloys; copper-zinc-lead alloys (lead brasses); and copper-zinc-tin alloys (tin brasses). The cast alloys comprise four main families of brasses: copper-tin-zinc alloys (red, semi-red and yellow brasses); "manganese bronze" alloys (high strength yellow brasses); leaded "manganese bronze" alloys (leaded high strength yellow brasses); copper-zinc-silicon alloys (silicon brasses and bronzes); and cast copper-bismuth and copper-bismuth-selenium alloys. Ingot for remelting for the manufacture of castings may vary slightly from the ranges shown.
Bronze	Wrought 500 - 699 Cast 900 - 959	Broadly speaking, bronzes are copper alloys in which the major alloying element is not zinc or nickel. Originally "bronze" described alloys with tin as the only or principal alloying element. Today, the term is generally used not by itself but with a modifying adjective. For wrought alloys, there are four main families of bronzes: copper-tin-phosphorus alloys (phosphor bronzes); copper-tin-lead-phosphorus alloys (leaded phosphor bronzes); copper-aluminum alloys (aluminum bronzes); and copper-silicon alloys (silicon bronzes). The family of alloys known as "manganese bronzes," in which zinc is the major alloying element, is included in the brasses, above.
Copper-Nickel	Wrought 700 - 734 Cast 960 - 969	These are alloys with nickel as the principal alloying element, with or without other designated alloying elements.
Copper-Nickel-Zinc Alloys	Wrought 735 - 799 Cast 970 - 979	Known commonly as "nickel silvers," these are alloys which contain zinc and nickel as the principal and secondary alloying elements, with or without other designated elements.
Leaded Copper	Cast 980 - 989	These comprise a series of cast alloys of copper with 20% or more lead, sometimes with a small amount of silver, but without tin or zinc.
Special Alloys	Cast 990 - 999	Alloys whose chemical compositions do not fall into any of the