

GENERAL CHARACTERISTICS OF CAST ALUMINUM ALLOYS SERIES

The utilization of these alloys varies a great deal; however, some general applications can be derived from the general alloy number series.

100.0 SERIES: Controlled unalloyed (pure) compositions. Used in the manufacture of electrical components.

200.0 SERIES: Alloys in which copper is the principal alloying element. Other alloying elements may be specified. The 200 Series is used extensively where hot hardness and strength are important such as cylinder heads and pistons for example.

300.0 SERIES: Alloys in which silicon is the principal alloying element. The other alloying elements such as copper and magnesium may be specified. The 3xx.x series comprises nearly 90% of all shaped castings produced. The 300 series exhibit good weldability and castability. They are used to produce crankcase housings, fuel tanks, liquid cooled engine components and valve housings.

400.0 SERIES: Alloys in which silicon is the principal alloying element.

500.0 SERIES: Alloys in which magnesium is the principal alloying element. This family of alloys has a good combination of strength, ductility, and shock resistance. They also exhibit good dimensional stability. Uses include instrument parts, clamps, impellers and vehicle components.

600.0 SERIES: Unused

700.0 SERIES: Alloys in which zinc is the principal alloying element. Other alloying elements such as copper and magnesium may be specified. These alloys have good machinability and corrosion resistance characteristics. Application include, machine tool parts, hand tools, pump housings and marine applications.

800.0 SERIES: Alloys in which tin is the principal alloying element. This series is used in high strength applications.

900.0 SERIES: Unused