

Tungsten Coppers

Tungsten Copper alloy is an alloy composite of Tungsten and Copper which has the combination s of the excellent properties of Tungsten and Copper, such as heat resistance, aberration resistance, high density, excellent thermal and electrical conductivity. It is easy to be machine.

MIPALLOY - TUNGSTEN COPPER



Mipalloy manufactures Tungsten Copper by Press, Sinter & Infiltration method with the tungsten content ranging from 50% to 90% by weight. The balance is copper.

1. Electrical Contact materials

Electrical contacts are subjected to extreme mechanical and thermal stresses during operation. For fractions of a second, temperatures rise to several thousand degrees as a result of the arcing. Only Tungsten Copper materials will stand these high temperature & aberration.

Tungsten Copper material has good resistance to arc erosion, mechanical wear, contact welding and good conductivity. They are usually selected for oil, gas, air or vacuum, devices. The contact surfaces will oxidize when switched in air. These press-sinter-infiltrate materials should only be considered for arcing surfaces in air when used as arcing tips, arc plates and arc runners. When switching with moderate contact arcing, the Tungsten Copper with a high copper content may give the lowest erosion. As arcing severity increases, the Tungsten

Copper with the higher refractory content withstand arc erosion better. Tungsten Coppers are also used as arcing edges of selector switchblades in transformer tap changers.

2. Electrodes for Spark Erosion

Tungsten Copper electrodes are best suitable material for electrical discharge machining (EDM) applications. It has excellent wear resistance, good metal removal rate and ability to retain good detail. It is used where speed and wear resistance are most important.

3. Resistance Welding

Tungsten Coppers are used for some spot welding application of low conductivity materials, and as die inserts for flash and butt resistance welding applications.

4. Heat Sinks

Modern computer processors like the 586 series and higher, generate a heat output per square centimeter similar to that of a household cooker surface. Tungsten-copper heat sinks and the processor fan remove the heat.