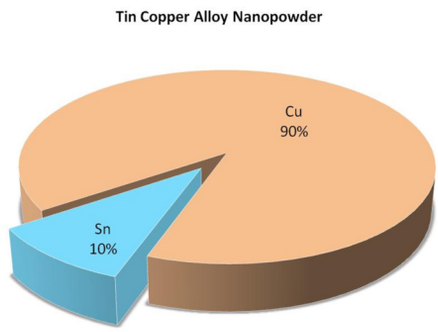
NANOSHEL
Creating Miracles in Black

Copper Tin Alloy NANOPARTICLES



Composition Chart

Cu:Sn

Stock No:
NS6130-07-702

CAS	:	7440-31-5 / 7440-50-8
Purity	:	99.9%
APS	:	<80nm
Color	:	Black/Tan
Form	:	Powder

Technical Specification

Molecular Formula	:	Sn:Cu
Density	:	8.94g/cm³
Melting Point	:	1083°C

Chemical Composition

Assay	:	99.9%
Tin	:	10%
Copper	:	90%
Other Metal	:	< 0.1 %

Copper Tin Alloy Nanopowder alloys are made from copper and tin, and were the first to be developed about four thousand years ago. Copper tin alloys or tin bronzes are known for their corrosion resistance. Tin bronzes are stronger and more ductile than red and semi red brasses. They have high wear resistance and low friction coefficient against steel. Tin bronzes; with up 15.8% tin, retain the structure of alpha copper. The tin is a solid solution strengthener in copper, even though tin has a low solubility in copper at room temperature. The room temperature phase transformation are slow and usually does not occur, therefore these alloys are single phase alloys. The tin bronzes are used in bearings, gears, piston rings, valves and fittings.

Application:

1. Good Castability
   - Sand casting
   - Die casting
   - Centrifugal castings: rings/ discs
   - Continuous castings: bars/ sections/ hollows
2. In-built Corrosion Protection
3. Low Frictional Properties and Good Resistance to Wear
   - Worm wheels
   - Automobile gear selector forks
   - Many other components where low friction and good wear resistance are required are commonly made from copper alloy castings.
4. Non-Sparking Characteristics

ISO 9001:2015 CERTIFIED COMPANY
20ZICE4589C
19ZAZGO1274G
20ZICE4588M

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