



MIRACLE HILL  
CHINA REFRIGERATION

# BRAZING ALLOYS SOLDERS

REFRIGERATION  
WELDING APPLICATIONS



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# Non-Silver Brazing Alloys

Phos-Copper



BCuP-2 or BCu93P

## λ Description

Non-Silver brazing alloy is a material with the binary alloy of copper-phosphorus base, which has good mobility and processing property. It applies to contact welding, gas flame welding, HF brazing and some furnace welding. Phosphor-copper brazing alloy has self-brazability and doesn't need brazing flux.

## λ Application

Contain less phosphorus, has better plastic nature, a little higher melting point.

## λ Certificates & Test



## λ Drawing

NO.: MDBCUP2  
DATE:2019-3-1

Dimension(mm)  
L=500  
W=3.2  
H=1.3

Type  
Circular  
Rectangular  
Ring

Other sizes are also available.

Circular                      Rectangular                      Ring

## λ Technical Data

Alloy #	AWS A5.8 Standard	Composition	Melting Range		Application
			Solidus °F / °C	Liquidus °F / °C	
BCu93P	BCuP-2	Silver-0% Copper-92.9% Phosphorus-7.1%	1310°F 710°C	1436°F 780°C	Copper and copper alloy parts, refrigeration compressor, not suitable for brazing attacking shocking bend parts.



# Low-Silver Brazing Alloys

Phos-Copper-Silver



BCuP-3, 4,5, 6, 7

## λ Description

Low-Silver brazing alloy can reduce the melting points, it can improve both the alloys' plasticity and wettability, as well as the alloys' strength and toughness.

## λ Certificates & Test



## λ Drawing

NO.: MDBCUP3  
DATE:2019-3-1

Dimension(mm)  
L=500  
W=3.2  
H=1.3

Circular

Rectangular

Ring

Other sizes are also available.

## λ Technical Data

Alloy #	AWS A5.8 Standard	Composition	Melting Range		Application
			Solidus °F / °C	Liquidus °F / °C	
BCu89PAg	BCuP-3	Silver-4.8% Copper-remainder Phosphorus-6.6%	1189°F 643°C	1445°F 785°C	Air condition and freezer, copper alloy tie-in electric motor.
BCu87PAg	BCuP-4	Silver-6% Copper-remainder Phosphorus-7%	1193°F 645°C	1336°F 724°C	Low P content suitable for ample clearance, high P content suitable for gap tie-in.
BCu80PAg	BCuP-5	Silver-14.5% Copper-remainder Phosphorus-5%	1193°F 645°C	1472°F 800°C	Copper and copper parts in air condition, freezer, compressor, electric motor
BCu91PAg	BCuP-6	Silver-2% Copper-remainder Phosphorus-7%	1193°F 645°C	1454°F 790°C	Medium gap tie-in
BCu88PAg	BCuP-7	Silver-4.6% Copper-remainder Phosphorus-7%	1193°F 645°C	1409°F 765°C	Air condition and freezer, copper alloy tie-in electric motor.



# High-Silver Brazing Alloys

Silver-Copper-Zinc

**B<sub>Ag</sub>-5**  
**B<sub>Ag</sub>-6**  
**B<sub>Ag</sub>-20**

## λ Description

High-Silver brazing alloy is a structure alloy based on silver or silver-base solid solution. Our material can be used to braze all ferrous metals and non-ferrous metals except Aluminum, Magnesium and other metals of low melting point.

The alloys are usually added zinc, stannum, nickel to form ternary or multi-element alloys in order to lower solders' melting point and reduce cost. For example, adding nickel to the silver-based brazing alloys can improve its heat resistance property, corrosion resistance property and wetting ability.

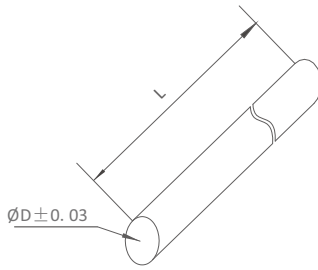
## λ Certificates & Test



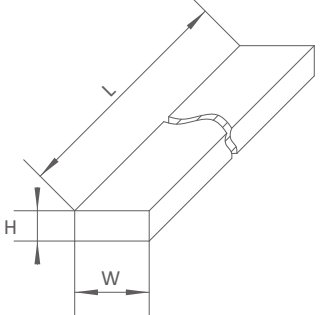
## λ Drawing

NO.: MDBAG5  
DATE:2019-3-1

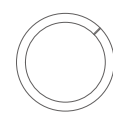
Dimension(mm)  
L=500  
W=3.2  
H=1.3



Circular



Rectangular



Ring

Other sizes are also available.

## λ Technical Data

Alloy #	AWS A5.8 Standard	Composition	Melting Range		Application
			Solidus °F / °C	Liquidus °F / °C	
B <sub>Ag</sub> 45CuZn	B <sub>Ag</sub> -5	Silver-43% Copper-30% Zn-27%	1229°F 665°C	1373°F 745°C	Electrical, motor, electrical parts, dairy, food industry, steel, copper, copper alloy brazing
B <sub>Ag</sub> 50CuZn	B <sub>Ag</sub> -6	Silver-50% Copper-35% Zn-15%	1274°F 690°C	1427°F 775°C	Electrical, dairy, food industry, steel, copper, copper alloy brazing
B <sub>Ag</sub> 30CuZn	B <sub>Ag</sub> -20	Silver-30% Copper-38% Zn-32%	1250°F 677°C	1410°F 766°C	Steel, stainless steel, copper alloy and the other non-ferrous metals brazing



# High-Silver Brazing Alloys

Silver-Copper-Zinc-Tin

B<sub>Ag</sub>-7

B<sub>Ag</sub>-24

## λ Description

Sliver-Copper-Zinc-Tin brazing alloy is made by adding Sn (stannum) to silver-copper-zinc brazing alloy, can reduce melting point and improve plasticity. It has low melting point property and has good wetting ability and gap filling ability. Besides, with bright and clean brazing seam surface and intensive joint, applies to brazing materials of lower temperature. When brazing, it has no cadmium pollution.

## λ Certificates & Test



## λ Drawing

NO.: MDBAG24  
DATE:2019-3-1

Dimension(mm)  
L=500  
W=3.2  
H=1.3

Circular

Rectangular

Ring

Other sizes are also available.

## λ Technical Data

Alloy #	AWS A5.8 Standard	Composition	Melting Range		Application
			Solidus °F / °C	Liquidus °F / °C	
B <sub>Ag</sub> 56CuZnSn	B <sub>Ag</sub> -7	Silver-55% Copper-23% Zn-17% Sn-5%	1148°F 620°C	1202°F 650°C	Mainly used in stainless steel for food industry brazing
B <sub>Ag</sub> 50CuZn (Ni)	B <sub>Ag</sub> -24	Silver-50% Copper-20% Zn-28% Ni-2%	1220°F 660°C	1301°F 705°C	Steel, stainless steel, copper alloy brazing

Contact us for other alloys,  
silver-copper-zinc-indium; silver-copper-zinc-cadmium;  
flux coated silver-copper, copper-zinc, aluminum base