

PhosCopper 0

◆ INTRODUCTION

Aufhauser PhosCopper 0 is primarily used for the joining of copper-to-copper on vibration free joints. It is very effective for joining tight fitting copper pipe and tubing. PhosCopper 0 should not be used on ferrous metals or copper alloys containing more than 10% nickel because of phosphorus embrittlement due to reactions with iron or nickel. PhosCopper 0 is extremely fluid at brazing temperatures and will penetrate joints with very little clearance. Best results are obtained with clearances of .001-.003". Melting of PhosCopper 0 is virtually complete at 1350 °F (732 °C). Best results are obtained when brazing slightly above this temperature.

◆ APPLICATIONS

- Brazing copper and copper alloys, as well as brass, bronze, silver, tungsten and molybdenum.

◆ CHEMICAL COMPOSITION

<u>Phosphorus</u>	<u>Copper</u>	<u>Total other</u>
7.25	Balance	0.15

◆ PHYSICAL and MECHANICAL PROPERTIES

Liquidus:	1460 °F (793°C)
Solidus:	1310 °F (710°C)
Brazing Range:	1350-1550 °F
Specific Gravity:	8.00
Density:	0.286 lb/cu.in.
Electrical Conductivity:	7.5% IACS
Electrical Resistivity:	23.2 Microhm-cm
Color:	Copper Yellow



◆ SPECIFICATIONS MEET or EXCEED

- AWS A5.8 BCuP-2
- ASME BCuP-2
- QQ-B-650B BCuP-2
- ISO 3677: B Cu 93P 710-820
- BS 1845 CP3
- DIN 8513 LCup 7
- NFA 81-362, 07 B1

◆ STANDARD SIZES AND DIAMETERS

- Diameters: 1/16", 3/32", 1/8", 3/16", 1/4"
- Sizes: 18", 20", 36" cut lengths
- Forms: Flat, Square, Round

◆ PROPERTIES OF BRAZED JOINTS

Generally, the joint strength produced by PhosCopper 0 will surpass the strengths of the base metals. Strength is a function of the base metals being joined, type of joint, design of joint, joint clearances and brazing procedures. The recommended maximum operating temperatures for PhosCopper 0 are 300 °F (continuous service) and 400 °F (short time service). Corrosion resistance is satisfactory except when the joint is in contact with sulfurous atmosphere (especially at elevated temperatures).

◆ ADDITIONAL INFORMATION

The phosphorus content of PhosCopper 0 acts as fluxing agent and no flux is necessary when brazing copper joints. However, when used with a copper alloy or one of the other brazeable metals, Aufhauser White SilverFlux must be used to promote wetting, bonding, and flow throughout the joint. The flow point of PhosCopper 0 is 1350 °F (732 °C).