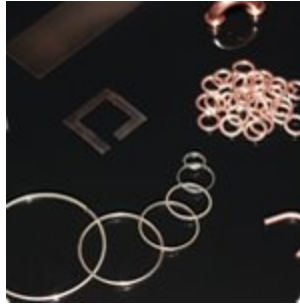


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### Item # BrazeIt-15, Copper Phosphorous Alloys

A popular phos-copper brazing alloy. Offers superior ductility and is the preferred choice when joint clearance and brazing temperature control are less than ideal.

BrazeIt 15 is used for the brazing of copper and copper alloys, brass and bronze. It can also be used for brazing silver, tungsten and molybdenum. It is very effective for joining pipe and tubing and is widely used for electrical work. BrazeIt 15 should not be used for brazing ferrous metals or copper alloys containing more than 10% nickel because of phosphorous embrittlement due to reactions with iron or nickel. Of the copper phosphorus brazing alloys, BrazeIt 15 has more ductility and better electrical conductivity than the lower silver content phos-coppers. It has good flow and wetting properties on copper, brass and bronze. Of the phos-copper filler metals, BrazeIt 15 has the most "sluggish" flow characteristics. This enables it to fill gaps better. The recommended joint clearances are between 0.001" and 0.005". Melting of BrazeIt 15 is virtually complete at 1300°F (704°C) even though the liquidus is not yet reached. Best results are obtained when brazing slightly above this temperature.

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#### Nominal Composition

Silver (Ag)	15.00 ± 0.50%
Copper (Cu)	80 (Balance)
Phosphorus (P)	5.00 ± 0.20%
Total Other Elements	0.15% Max.

#### Specifications

Melting Pt.	1190 °F 645 °C
Flow Pt.	1300 °F 705 °C
MBT <sup>1</sup>	1500
AWS A5.8	BCuP-5
ASME	BCuP-5
QQ-B-650	BCuP-5
MIL-B-15395	Grade III
QQ-B-654	BCuP-5
Preform Options	Brazing Discs Brazing Rings Brazing Shims Brazing Washers Custom Designs Cut-Offs Edgewounds
Resale Options <sup>2</sup>	Brazing Rods Brazing wire Paste
Pricing & availability	Our advanced manufacturing processes are second to none. This results in superior quality that is still provided at an industry competitive prices. We offer many items from stock including BrazeIt #0 brazing rings and brazing rod items.

<b>Approx. Wire Length (BCuP/lb.) (BAg/Tr.oz)</b>	1080 in; 0.062 diameter 4340 in; 0.031 diameter 475 in; 0.093 diameter
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<sup>1</sup> Recommended Brazing Temperature

<sup>2</sup> Brazing Wire - Auto Feed Spools

### Physical Constants

<b>Solidus</b>	1190 °F 643 °C
<b>Liquidus</b>	1475 °F 802 °C
<b>Brazing Range</b>	1300 to 1500 °F 704 to 816 °C
<b>Specific Gravity</b>	8.44
<b>Density</b>	4.45 T.oz./cu.in. 0.305 lb./cu.in
<b>Electrical Conductivity</b>	9.9 % IACS
<b>Electrical Resistivity</b>	17.4 Micro ohm-cm
<b>Color</b>	Light Copper

### Properties of Brazed Joints

Generally, the joint strength using Brazeit 15 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 Brazeit 15 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).

### Applications

The phosphorus content of Brazeit 15 acts as fluxing agent and no flux is necessary when brazing copper to copper joints. However, when used with a copper alloy or one of the other brazeable metals, a brazing flux must be used to promote wetting, bonding and flow throughout the joint. The flux used must be active within the required temperature range of Brazeit 15 and active throughout the heating cycle. The flow point of Brazeit 15 is 1300 °F (704 °C).

Best for large gap application, clearance of .002" to .006". Least fluid of BCuP family. Easy to use.

### Safety Information

The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting." For more complete information, refer to the Material Safety Data Sheet for Brazeit 15.

### Available Forms

Standard Forms of Brazeit 15 are brazing wire, brazing strip, and brazing preforms.