

## **Brazelt-18M (BCuP-8)**

<b>Nominal Composition:</b>	
Silver	18.00 ± 1.0%
Phosphorous	6.25 ± 0.25%
Copper	Balance
Total other Elements	0.15 % Max
<b>Physical Constants:</b>	
Solidus	1190°F (645°C)
Liquidus	1235°F (665°C)
Brazing Range	1225-1350°F (663-732°C)
Specific Gravity	8.35
Density (lb/cu in)	.302
Electrical Conductivity (% IACS)	6.0
Electrical Resistivity	29.0
Color	Light Copper

### **DESCRIPTION:**

Brazelt-18M is a ternary alloy of silver, phosphorus, and copper approaching the eutectic composition. It is very fluid at brazing temperature and should be used on well fitted joints. Brazelt-18Ms low brazing temperature and narrow solidus-liquidus range makes it ideal for applications where temperature is a factor. It should be used with slow heating rates, such as in furnace brazing.

### **PROPERTIES OF BRAZED JOINTS:**

Generally, the joint strength using Brazelt-18M 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 Brazelt-18M are 400°F (continuous service) and 500°F (short time service). Corrosion resistance is satisfactory except when the joint is in contact with sulfurous atmosphere (especially at elevated temperatures).

### **APPLICATIONS:**

Brazelt-18M is used for joining of copper and copper alloys, such as brass or bronze. It is suitable for use on silver, tungsten, and molybdenum. It should not be used on ferrous or nickel alloys. On copper to copper applications, it is self-fluxing due to the fluxing action of the phosphorous content. Its low melting temperature makes it ideal for application on copper to brass where temperature and dezincification is a factor.

### **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 Brazelt 18M.

### **AVAILABLE FORMS:**

Standard forms of Brazelt 18M are wire and preforms.