

SILVABRAZE®

NOMINAL COMPOSITION

Silver	1.0% ± 0.20%
Phosphorus	6.0% ± 0.20%
Copper	Remainder
Tin	0.15% Max
Other Elements (Total)	0.15% Max

PHYSICAL PROPERTIES

Color	Gray
Melting Point (Solidus)	1190°F (645°C)
Flow Point (Liquidus)	1510°F (821°C)
Brazing Temperature Range	1325°F - 1550°F (718°C - 843°C)
Specific Gravity	8.08
Density(lbs/in ³)	0.292
Electrical Conductivity (%IACS) ⁽¹⁾	N/A
Electrical Resistivity (Microhm-cm)	N/A

⁽¹⁾ IACS = International Annealed Copper Standard

PRODUCT USES

Silvabraz is a low cost brazing filler metal suitable for joining copper to copper and copper to copper alloys. It is used on refrigeration units, air conditioning apparatus, electrical conductors, copper and brass pipe fittings, and other copper and brass equipment.

BRAZING CHARACTERISTICS

Silvabraz is a copper-rich, intermediate temperature, brazing filler metal that is free flowing and self-fluxing on copper by virtue of its phosphorus content. This alloy is relatively fluid when heated rapidly to its flow point and will penetrate joints with marginal clearances. Silvabraz liquates (i.e. separates into high and low melting constituents) if heated slowly through its melting range. The self-fluxing property of Silvabraz is effective on copper only. Copper base alloys, such as brass or bronze, may be brazed with Silvabraz and flux but cannot be used on ferrous metals or nickel base alloys, since the phosphorus produces brittle iron or nickel phosphorus at the joint interface.

PROPERTIES OF BRAZED JOINTS

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, and metallurgical interaction between the base metal and the filler metal.

CORROSION RESISTANCE

The corrosion resistance of Silvabraz is comparable to that of copper except when exposed to sulphur-containing compounds, especially at elevated temperatures. Under these conditions Silvabraz undergoes progressive deterioration. Exposure to pressurized steam can also result in accelerated corrosion.

AVAILABLE FORMS

Rods

SPECIFICATIONS

Silvabrazo conforms to the following specifications: N/A

APPLICABLE PRODUCT CODE(S)

The applicable Lucas-Milhaupt product code(s) for this technical data sheet: 71-011, 33830.

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 Silvabrazo.

WARRANTY CLAUSE

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