

## PREMABRAZE<sup>®</sup> 920

### ***NOMINAL COMPOSITION***

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Gold	92.0% ± 1.0%
Palladium	Remainder
Zinc	0.001%
Cadmium	0.001%
Lead	0.002%
Phosphorous	0.002%
Carbon	0.005%
Other high vapor pressure elements each <sup>(1)</sup>	0.001% Max
Total all high vapor pressure elements (Including zinc, cadmium, and lead)	0.010% Max
Total all other impurity elements	0.01% Max

<sup>(1)</sup> Elements with a vapor pressure higher than 10<sup>-7</sup> Torr (1.3 x 10<sup>-5</sup> Pa) at 932°F (500°C)

### ***PHYSICAL PROPERTIES***

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Color	Silver White
Melting Point (Solidus)	2190°F (1200°C)
Flow Point (Liquidus)	2265°F (1240°C)
Brazing Temperature Range	2265°F - 2325°F (1240°C - 1275°C)
Specific Gravity	18.42
Density (Troy oz/in <sup>3</sup> )	9.71
Electrical Conductivity (%IACS) <sup>(2)</sup>	22.6
Electrical Resistivity (Microhm-cm)	7.63

<sup>(2)</sup> IACS = International Annealed Copper Standard

### ***PRODUCT USES***

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Premabraz 920 can be used on any of the common ferrous and non-ferrous alloys. Due to its low vapor pressure and high melting range, Premabraz 920 is commonly used in brazing of cathode components.

### ***BRAZING CHARACTERISTICS***

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Premabraz 920 has improved corrosion and oxidation resistance characteristics in comparison to standard silver-copper alloys. This alloy exhibits good wetting and flow characteristics on tungsten, molybdenum, stainless steel and nickel base alloys.

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

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The properties of a brazed joint are dependent upon the base metal, joint design and brazing technique. For controlled atmosphere brazing or vacuum brazing the recommended radial joint clearance for gold braze alloys fall within 0.000 in. - 0.002 in. (0.00 mm - 0.05 mm).

### ***AVAILABLE FORMS***

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Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.

## ***SPECIFICATIONS***

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Premabraz 920 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8M/A5.8 BVAu-8 Grade 1 and Grade 2

## ***APPLICABLE PRODUCT CODE(S)***

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The applicable Lucas-Milhaupt product code(s) for Premabraz 920: 69-192.

## ***SAFETY INFORMATION***

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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 Safety Data Sheet for Premabraz 920.

## ***WARRANTY CLAUSE***

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