

## Prince & Izant Company

12999 Plaza Drive  
Cleveland, Ohio 44130

T: 216-362-7000

F: 216-362-7456

[princeizant.com](http://princeizant.com)



CUSTOMER FOCUSED. SOLUTION DRIVEN.

## GOLD BRAZE 92 (BVAu-8)

### TECHNICAL DATA

#### NOMINAL COMPOSITION

<b>Gold</b>	92.0% ± 1.0
<b>Palladium</b>	8.0% ± 0.5
<b><u>Vacuum Grade Trace Elements</u></b>	
<b>Cadmium</b>	0.001% max.
<b>Zinc</b>	0.001% max.
<b>Phosphorus</b>	0.002% max.
<b>Lead</b>	0.002% max.
<b>Carbon</b>	0.005% max.
<b>Other volatile elements each*</b>	0.002% max.
<b>Volatile elements total</b>	0.010% max.
<b>Total non-volatile elements (Grade 1)</b>	0.01% max.
<b>Total non-volatile elements (Grade 2)</b>	0.05% max.

\*Elements with a vapor pressure higher than  $10^{-7}$  torr at 932°F (such as Mg, Sb, K, Li, Tl, S, Cs, Rb, Se, Te, Sr, and Ca) are limited to 0.001% each for Grade 1 and 0.002% for Grade 2.

#### PHYSICAL PROPERTIES

<b>Color</b>	Gold Silver
<b>Solidus</b>	2190 °F (1199 °C)
<b>Liquidus</b>	2266 °F (1241 °C)
<b>Density (Troy Oz/in.<sup>3</sup>)</b>	9.72
<b>Yield Strength (MPa)</b>	110
<b>Tensile Strength (MPa)</b>	198
<b>Thermal Conductivity (W/(m*K))</b>	105
<b>CTE (<math>\times 10^{-6}/^{\circ}\text{C}</math>)</b>	17.8
<b>Electrical Resistivity (<math>\times 10^{-9}</math> ohm*m)</b>	73
<b>Electrical Conductivity (<math>\times 10^6</math> / (ohm*m)</b>	13.7
<b>Elongation (%)</b>	23
<b>Recommended Brazing Temperature</b>	2316°-2366°F (1269-1297°C)

#### USES

BAu-8 is a very ductile alloy generally used in high temperature applications due to its high oxidation resistance. It wets well to tungsten, molybdenum, tantalum and other high-temperature superalloys.

#### BRAZING CHARACTERISTICS

Wets well to superalloys and provides high ductility due to high level of gold. BAu-8 exhibits excellent corrosion and oxidation resistance due to the stable nature of its components.

**PROPERTIES OF BRAZED JOINTS**

The properties of a brazed joint are dependent upon the base metal, joint design and brazing technique. For atmospheric brazing the recommended radial joint clearance for gold base alloys fall within .0015-.002” range.

**AVAILABLE FORMS**

Strip, wire, powder, and preforms to specifications.

**SPECIFICATIONS**

Gold Braze 92 conforms to: Unified Numbering System (UNS) P00927, American Welding Society (AWS) A5.8/A5.8M BVAu-8 Grade 1 and Grade 2

Individuals requiring further information and Engineering Specification Documents may wish to contact the Engineering Society for Advanced Mobility, Land Sea Air and Space, The Society of Automotive Engineers <http://www.sae.org/> (SAE AMS) or The American Welding Society (AWS) <http://aws.org/>

**NOTE:**

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