

## Prince & Izant Company

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## GOLD BRAZE 3762 (BAu-1) TECHNICAL DATA

<b>NOMINAL COMPOSITION</b>	<b>Gold</b>	37.5% ± 0.5
	<b>Copper</b>	Remaining
	<b>Other Elements, Total</b>	0.15% Max
<b>PHYSICAL PROPERTIES</b>	<b>Color</b>	Red Brass
	<b>Solidus</b>	1815°F (990°C)
	<b>Liquidus</b>	1860°F (1015°C)
	<b>Recommended Brazing Temperature</b>	1910-1960°F (1043-1071°C)
	<b>Density (Troy oz/in<sup>3</sup>)</b>	5.91
	<b>Specific Gravity</b>	11.1
	<b>Yield Strength (MPa)</b>	72
	<b>Tensile Strength (MPa)</b>	379
	<b>Elongation (%)</b>	30
	<b>Thermal Conductivity (W/(m•K))</b>	83
	<b>CTE (x10<sup>-6</sup>/°C)</b>	18.8
<b>Electrical Conductivity (x10<sup>6</sup>/(ohm•m))</b>	10.8	
<b>Electrical Resistivity (x10<sup>-9</sup> ohm•m)</b>	56	
<b>USES</b>	Gold Braze 3762 can be used on any of the common ferrous and non-ferrous alloys. This alloy exhibits good wetting characteristics on metallized ceramics. Typical applications include brazing of electron tubes, vacuum tubes, wave guides and electronic industry.	
<b>BRAZING CHARACTERISTICS</b>	Gold Braze 3762 is generally used in reducing, vacuum, or inert atmosphere. It is a less ductile alloy than standard gold-copper-nickel alloys. The composition of the alloy allows for use in applications where braze filler metals low in volatile constituents are required. Due to its narrow plastic range, Gold Braze 3762 exhibits free flowing characteristics	
<b>PROPERTIES OF BRAZED JOINTS</b>	The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design and brazing technique. For controlled atmosphere brazing or vacuum brazing the recommended radial joint clearance for gold base alloys fall within 0.000in – 0.002in (0.00mm-0.05mm) range.	
<b>SPECIFICATIONS</b>	Gold Braze 3762 alloy conforms to: Unified Numbering System (UNS) P00350, American Welding Society (AWS) A5.8/A5.8M BAu-1	
<b>AVAILABLE FORMS</b>	Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.	

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:**

#### **DISCLAIMER**

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