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GOLD BRAZE 8020 (BAu-2/BVAu-2) TECHNICAL DATA

NOMINAL COMPOSITION	Gold	80% ± 0.5
	Copper	Balance
	<u>Vacuum Grade Trace Elements</u>	
	Cadmium	0.001% max.
	Zinc	0.001% max.
	Phosphorus	0.002% max.
	Lead	0.002% max.
	Carbon	0.005% max.
	Other volatile elements each*	0.002% max.
	Volatile elements total	0.010% max.
	Total non-volatile elements (Grade 1)	0.01% max.
Total non-volatile elements (Grade 2)	0.05% max.	
<p>*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.</p>		
PHYSICAL PROPERTIES	Color	Gold
	Melting Point	1635°F (891°C)
	Recommended Brazing Temperature	1685-1735°F (918-946°C)
	Density (TOz/in³)	8.18
	Yield Strength (MPa)	127
	Tensile Strength (MPa)	393
	Thermal Conductivity (W/(m•K))	52
	CTE (x10⁻⁶/°C)	17.9
	Electrical Conductivity (x10⁵/(ohm•m))	7.6
Electrical Resistivity (x10⁻⁹ ohm•m)	131	
USES	<p>Gold Braze 8020 is a eutectic alloy that 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 in electronic industry.</p>	
BRAZING CHARACTERISTICS	<p>GB8020 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 eutectic nature GB8020 exhibits free flowing characteristics.</p>	
PROPERTIES OF BRAZED JOINTS	<p>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.</p>	

SPECIFICATIONS

GB8020 alloy conforms to: Unified Numbering System (UNS) P00807 and American Welding Society (AWS) A5.8/A5.8M BVAu-2 Grade 1 and Grade 2.

AVAILABLE FORMS

Wire, strip, engineered preforms and 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/>

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