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GOLD BRAZE 3565 (BVAu-9) TECHNICAL DATA

| | | |
|---|--|---------------------------|
| NOMINAL COMPOSITION | Gold | 35% ± 0.5 |
| | Copper | Remaining |
| | <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. |
| *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 | Color | Red Brass |
| | Solidus | 1810°F (987°C) |
| | Liquidus | 1850°F (1010°C) |
| | Recommended Brazing Temperature | 1900-1950°F (1037-1065°C) |
| | Density (TOz/in³) | 5.80 |
| | Specific Gravity | 11.01 |
| | Yield Strength (MPa) | 107 |
| | Tensile Strength (MPa) | 328 |
| | Elongation (%) | 27 |
| | Thermal Conductivity (W/(m•K)) | 90 |
| | CTE (x10⁻⁶/°C) | 19.1 |
| | Electrical Conductivity (x10⁶/(ohm•m)) | 11.8 |
| Electrical Resistivity (x10⁻⁹ ohm•m) | 85 | |
| USES | Gold Braze 3565 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. Gold Braze 3565 is readily used in brazing of ceramic to metal seals. | |
| BRAZING CHARACTERISTICS | Gold Braze 3565 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 3565 exhibits free flowing characteristics. | |

**PROPERTIES OF
BRAZED JOINTS**

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.

SPECIFICATIONS

Gold Braze 3565 conforms to: Unified Numbering System (UNS) P00354, American Welding Society (AWS) A5.8/A5.8M BVAu-9 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/>

NOTE:

DISCLAIMER

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