

Data Sheet

Gold

Description:

High conductivity gold brazing filler.

Composition by weight is between: **99.990%** and **99.999% Au**, which represents the purest commercially available form of the metal.

Prime Features:

- Highly ductile, non-oxidizable. Wets most metals.
- Suitable for brazing under Vacuum, Hydrogen, inert atmosphere

Typical Applications:

- Vacuum tubes
- Aerospace components

Physical Properties*

Liquidus Temperature	1064 °C
	1947 °F
Solidus Temperature	1064 °C
	1947 °F
Coefficient of Thermal Expansion (CTE)	14.2 x 10 ⁻⁶ /C, for 20 – 500 °C
	17.9 x 10 ⁻⁶ /°F, for 68 – 932 °F
Thermal Conductivity (Calculated)	318 W/m·K
	184 BTU/ft·h·°F
Density	19.3 Mg/m ³
	0.697 lb/in ³
Yield Strength (0.2% offset)	40 MPa
	5.7 x 10 ³ lb/in ²
Tensile Strength	105 MPa
	15 x 10 ³ lb/in ²
Elongation (2in/50mm gage section)	45%
Electrical Resistivity	23.5 x 10 ⁻⁹ ohm·m
Electrical Conductivity	42.6 x 10 ⁶ /ohm·m
Vapor Pressure (Calculated)	
Recommended Brazing Temperatures	1075 – 1100 °C
Recommended Brazing Atmospheres	10 ⁻⁵ mm Hg, H ₂ , or inert gas

* Please note that all values quoted are based on test pieces and may vary according to component design. These values are not guaranteed in any way and should only be treated as indicative values. They should be used for guidance only and for no other purpose whatsoever.

Impurity Limits

Zn	less than 0.001%
Cd	less than 0.001%
Pb	less than 0.002%
P	less than 0.002%
C	less than 0.01%

All other metallic impurities having a vapor pressure higher than 10⁻⁷ mm Hg at 500 °C are limited to 0.002% each. Impurities having a vapor pressure lower than 10⁻⁷ mm Hg at 500 °C are limited to a total of 0.075%. (This applies to all forms except powder and extrudable paste.)

Supplied As:

- Foil
- Wire
- Powder
- Extrudable Paste
- Preforms

The determination as to the adaptability of any Wesgo materials to the specific needs of the Buyer is solely the Buyer's prerogative and responsibility. All technical information, data and recommendations are based on tests and accumulated experience data, which Wesgo believed to be reliable. However, the accuracy and completeness thereof are not guaranteed.