GOLD BONDING WIRE

TECHNICAL DATASHEET

COINING's Gold Bonding Wire

COINING specializes in manufacturing up to 99.99% min purity gold ball and wedge bonding applications.

Our in-house casting, drawing, annealing and A2LA-accredited analytical method capabilities ensure we deliver homogeneous, high-purity wire with ultra-clean surfaces and smooth finish.

We offer wire in a full range of diameters, to meet the needs for strength and elongation in your wire application. We work with our customers to supply a custom solution where the technical parameters like tensile and elongation are specific to their requirements.

Why Gold Bonding Wire?

Gold (Au) bonding wire is used in a wide range of applications rangining from high pin-count, ultra-fine pitch microelectronic devices to high-power discrete components.

Au is the preferred choice of bonding material when

a) the contact material is not compatible with Aluminum (Al) and/or Copper (Cu)

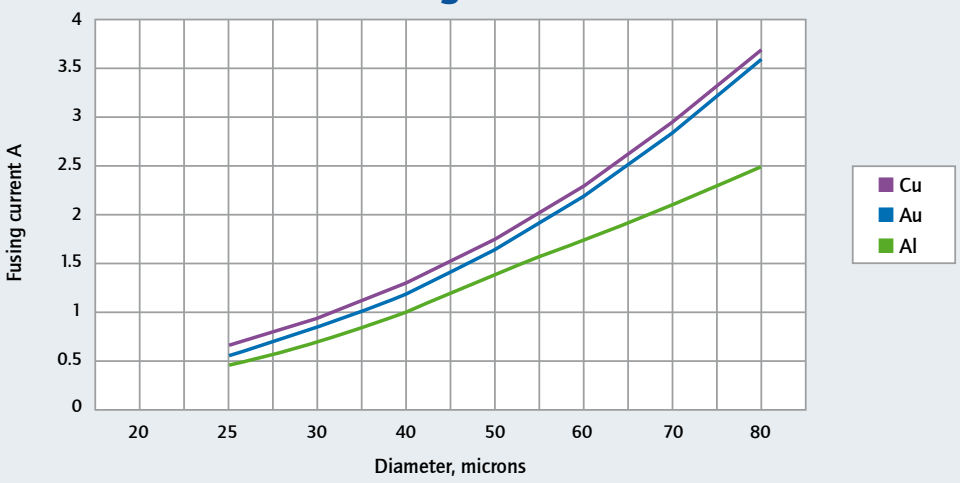
b) the contact area is limited

c) the device will be subject to high temperature or high humidity environments.

The Advantages of Gold Bonding Wire:

- Extreme bond reliability
- A wide processing window
- Low-impact ball and wedge bonding
- Superior looping performance
- High tensile test performance
- Excellent corrosion resistance
- Higher fusing current than standard Al bond wire.

Fusing Current



COINING™

AMETEK®
COMPONENTS AND WIRE

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Material Specification	
Au	99.99% min.
Be	3 - 10 ppm
Impurities	Cu, Ag < 30 ppm; Fe, Mg < 20 ppm
Total impurities all elements	<100 ppm max

Physical Properties	
Density:	19.34 g/cm^3
Melting Point:	1063°C
Electrical Resistivity: (@20°C)	2.3 μΩ-cm
Electrical Conductivity: (@20°C)	75% (IACS)
Thermal Conductivity: (@20°C)	315 W/(m-K)
Fusing Current (10 mm x 25 μm)	0.52 A

Gold Wire Mechanical Properties*

Composition	Diameter		Tensile Strength (gms)	Elongation (%)
99.99% Au	0.7 mil	17.5 μm	3 - 10	2 - 6
	0.8 mil	20 μm	4 - 13	2 - 7
	0.9 mil	22.5 μm	5 - 16	2 - 8
	1.0 mil	25 μm	6 - 20	2 - 8
	1.3 mil	32.5 μm	10 - 45	2 - 10
	1.5 mil	37.5 μm	13 - 50	2 - 12
	1.7 mil	42.5 μm	15 - 60	2 - 12
	1.8 mil	45 μm	20 - 70	2 - 12
	2.0 mil	50 μm	25 - 85	2 - 15
	3.0 mil	75 μm	50 - 180	2 - 20

* Typical specifications

Contact Us

Ask An Enginer a technical question, by simply scanning the QR code and drop us a line.

COINING™

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