

Prince & Izant Company

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GOLD TECHNICAL DATA

NOMINAL COMPOSITION

Gold 99.90% Min
Other Available Grades Include: 99.95%, 99.99%, 99.999%

Color Gold
Melting Point 1945°F (1062°C)
Recommended Brazing Temperature 1945-2045°F (1062-1119°C)
Density (Troy oz/in³) 10.2
Specific Gravity 19.3
Electrical Conductivity (%IACS) 73.4
Electrical Resistivity (Microhm-cm) 23.4
Tensile Strength (KPSI)
 Hard: 46
 Annealed: 20
Elongation (%)
 Hard: 1.5
 Annealed: 36

PHYSICAL PROPERTIES

GOLD WIRE CHARACTERISTICS			
Diameter	Temper	Elongation	Minimum Breaking Load
.001"	Hard	.5-2%	18 grams
	Stress-Relieved	1-3%	8 grams
	Annealed	3-8%	7.5 grams
	Fully Annealed	8-12%	6 grams
.0015"	Hard	5-2%	40 grams
	Stress-Relieved	1-3%	16 grams
	Annealed	3-8%	15 grams
	Fully Annealed	8-12%	13.5 grams
.002"	Hard	5-2%	70 grams
	Stress-Relieved	1-3%	32 grams
	Annealed	3-8%	30 grams
	Fully Annealed	8-12%	24 grams

USES

Gold is widely used in numerous electrical, electronic and industrial applications, such as waveguide assemblies, transistor units and circuit boards. Gold have been readily used in coating and sputtering applications in numerous electrical and industrial applications. Gold has been extensively used in dental and jewelry applications as well.

BRAZING CHARACTERISTICS

Gold is typically selected for its favorable thermal and electrical conductivity properties, as well as for its good resistance to oxidation and corrosive attack. It also exhibits excellent ductility and is easily joined by welding or brazing.

**PROPERTIES OF
BRAZED JOINTS**

The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design and filler metal.

SPECIFICATIONS

Gold products available in conformance with ASTM B562 – 95 (2012)

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:

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