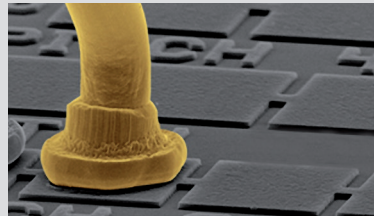
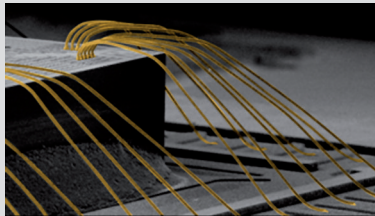


Au HA6

Universal Wire for Fine Pitch and Low Loop



In contrast to doped Au wires, alloyed wire types contain a low percentage of alloying elements. This results in markedly higher wire strength, shorter heat affected zones and better thermal stability without a significant increase in electrical resistance. The increased wire strength, while maintaining all other mechanical properties, permits a

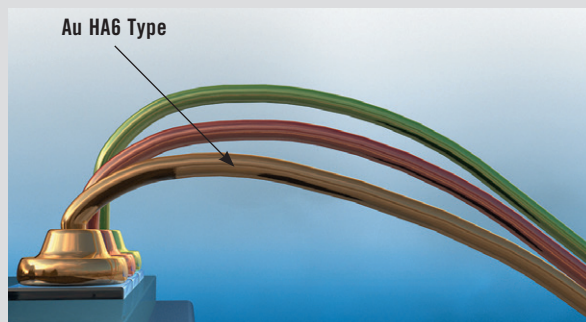
reduction of wire diameter together with a marked saving in precious metal costs.

Areas of application

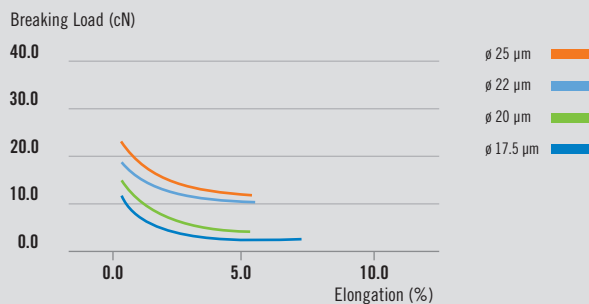
- High frequency bonding
- Low temperature bonding
- Low- and long-loop bonding
- High speed bonding
- Ultra fine pitch bonding
- Ball bumping

Au HA6 Benefits

- High strength and fine pitch wire type
- Increased strength, high loop stiffness
- Very good pull strengths and shear
- Long & low loop geometries
- Optimum stabilized phase formation
- High thermal stability
- Improved reliability



Breaking Load vs. Elongation



Recommended Technical Data of Au HA6

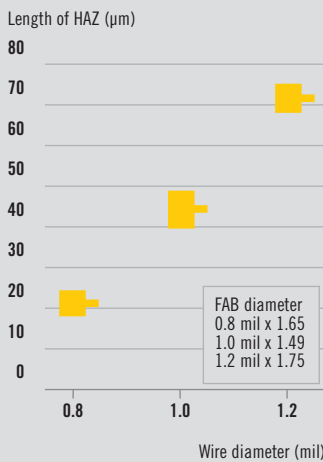
Diameter	Microns (µm)	17.5	20	23	25	30	33	38	50
	Mils	0.7	0.8	0.9	1.0	1.2	1.3	1.5	2.0
Elongation	%	2 – 6	2 – 6	2 – 6	2 – 8	2 – 8	3 – 8	3 – 8	3 – 8
Breaking Load	cN	> 4	> 5	> 7	> 9	> 14	> 17	> 20	> 38

For other diameters, please contact Heraeus Bonding Wires sales representative.

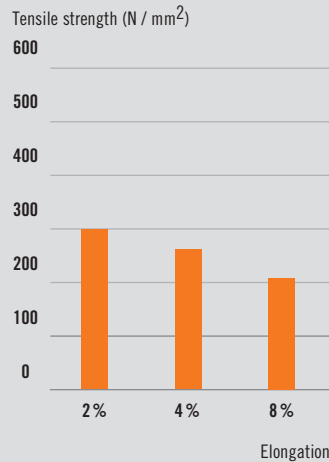
HA6 Characteristics for 25 µm diameter

Non-Gold Elements	< 100 ppm	Heat Conductivity	3.12 W/cm.K
Elastic Modulus	> 85 GPa	Electrical Resistivity	2.3 µΩ-cm
Heat Affected Zone (HAZ)	70 – 110 µm	Coeff. of Linear Expansion (20 – 100 °C)	14.2 ppm/K
Melting Point	1063 °C	Fusing Current for 25 µm, dia 10 mm length (in air)	0.36 A
Density	19.32 g/cm³		

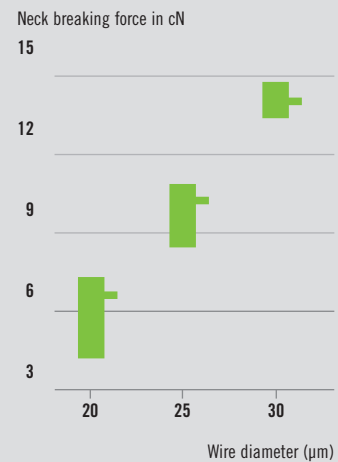
Heat Affected Zone (HAZ)



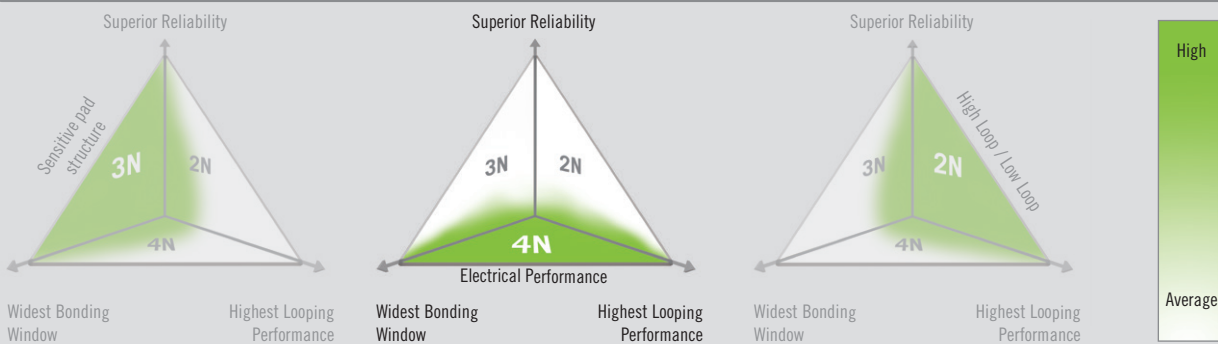
Breaking Load vs. Elongation



Neck Strength



Gold Wire Segmentation by Properties



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The descriptions and engineering data shown here have been compiled by Heraeus using commonly-accepted procedures, in conjunction with modern testing equipment, and have been compiled as according to the latest factual knowledge in our possession. The information was up-to-date on the date this document was printed (latest versions can always be supplied upon request). Although the data is considered accurate, we cannot guarantee accuracy, the results obtained from its use, or any patent infringement resulting from its use (unless this is contractually and explicitly agreed in writing, in advance). The data is supplied on the condition that the user shall conduct tests to determine materials suitability for particular application.