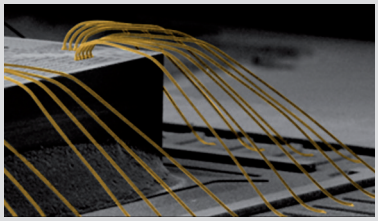
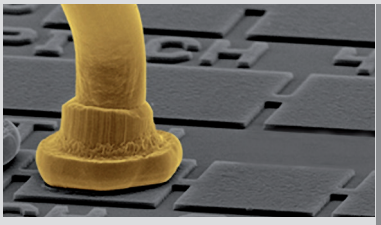
Heraeus

Electronics

Au HA6
Universal Wire for Fine Pitch and Low Loop

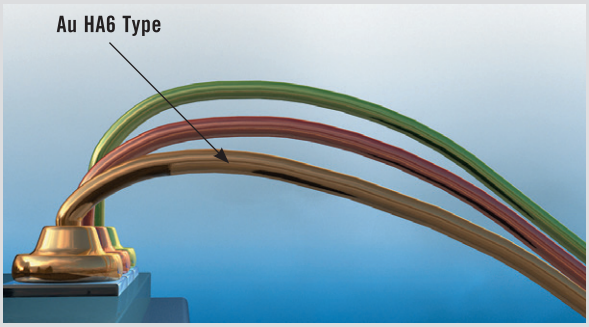




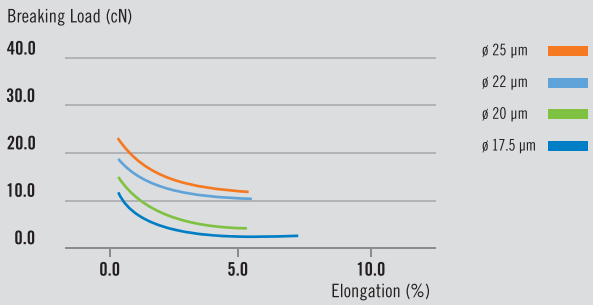
Au HA6 Benefits
- High strength and fine pitch wire type
- Increased strength, high loop stiffness
- Very good pull strengths and shear
- Long & low loop geometries
- Optimum stabilized phase formation
- High thermal stability
- Improved reliability

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 resist-ance. 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



Breaking Load vs. Elongation



Recommended Technical Data of Au HA6

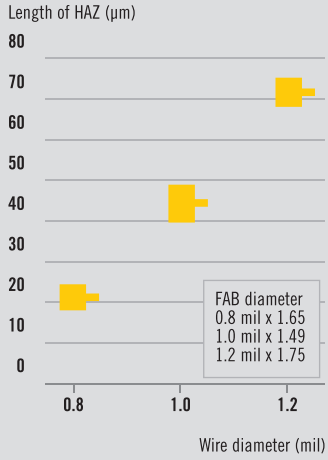
Diameter	**Microns (µm)**	17.5	20	23	25	30	33	38	50
	Mils	0.7	0.8	0.9	1.0	1.2	1.3	1.5	2.0
Elongation	**%**	2 – 6	2 – 6	2 – 6	2 – 8	2 – 8	3 – 8	3 – 8	3 – 8
Breaking Load	**cN**	> 4	> 5	> 7	> 9	> 14	> 17	> 20	> 38

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

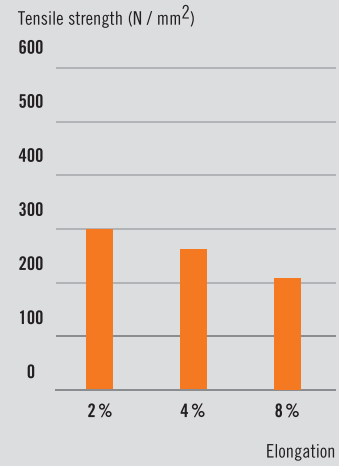
HA6 Characteristics for 25 µm diameter

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		

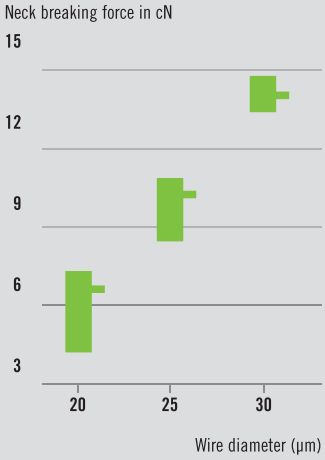
Heat Affected Zone (HAZ)



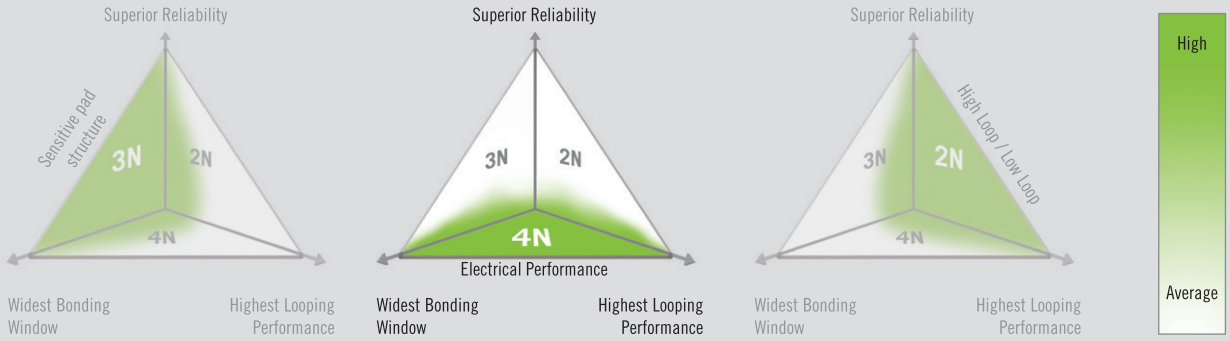
Breaking Load vs. Elongation



Neck Strength



Gold Wire Segmentation by Properties



The data given here is valid. We reserve the right to make technical alterations.

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