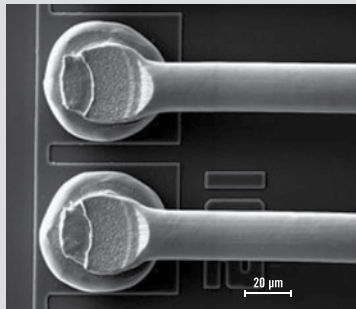
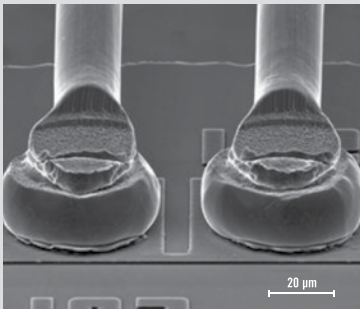
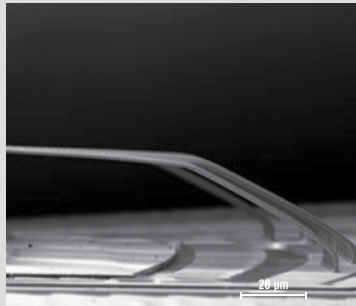
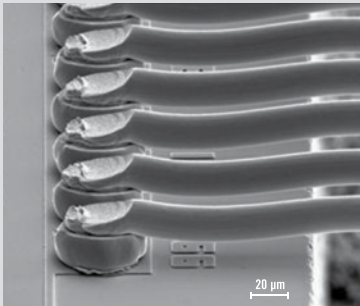




Palladium Coated Copper Wire for IC Applications

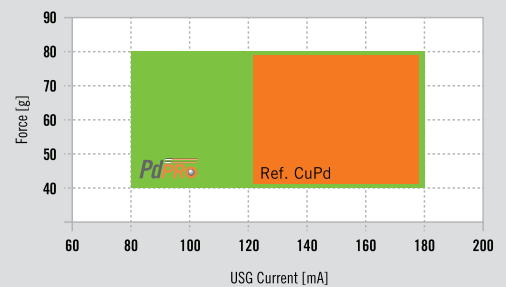


BGA Device, 60 µm BPP, 20 µm Diameter

Benefits and Features

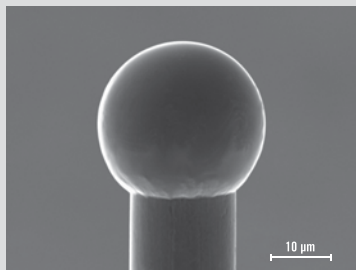
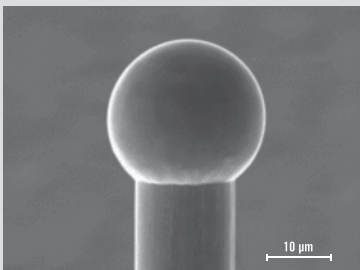
- Robust Free Air Ball quality at wide range of gas flow rate
- Higher stitch pull and wider 2nd bond process window
- Easy to optimize and able to Plug & Play with other CuPd wire
- Good for SSB / RSSB bonding
- Available in diameter ranging from 0.6 – 2.0 mil

Wider 2nd Bond Process Window



Wire Diameter: 18 µm, Device Type: BGA, Capillary part #: K&S C8-FG-1034-P37 (H:8.5, CD:10.5, T:23, OR:01, F:011), Bonder Type: iConn, Bonding Temperature: 175 °C

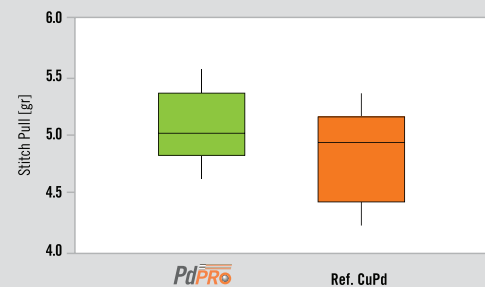
Consistent FAB roundness in N2 environment



Target FAB: 24 µm, Wire Diameter: 15 µm, EFO Current / Time: 20 mA / 330 µs, Bonder: Ultra, N₂ Gas Flow Rate: 0.3 – 0.9 LPM

Target FAB: 28 µm, Wire Diameter: 18 µm, EFO Current / Time: 60 mA / 145 µs, Bonder: iConn, N₂ Gas Flow Rate: 0.3 – 0.9 LPM

Higher Stitch Pull Values



Recommended Technical Data of PdPRO

Diameter	Microns (µm)	15	18	20	23	25	28	30	33	38	50
	Mils	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.5	2.0
Elongation	(%)	5 – 11	6 – 12	9 – 15	11 – 17	12 – 18	10 – 22	10 – 22	10 – 22	10 – 20	10 – 22
Breaking Load	(g)	2 – 8	3 – 9	4 – 11	7 – 13	10 – 16	12 – 19	15 – 21	18 – 25	25 – 42	50 – 65

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



Characteristics for 0.8 mil diameter

Physical Properties

Density	9.03 g/cm ³
Melting Point*	1081 °C
Heat Conductivity*	401 W/m K
Specific Heat Capacity @ 25 °C*	352 J/kg K
Coeff. of Thermal Expansion*	16.6 (µm/m °C, 0-30 °C)
Electrical Resistivity	1.85 µΩ-cm
FAB Hardness (60 mA EFO)	92 – 107 HV (0.01 N / 5 s)
Wire Hardness	97 – 107 HV (0.01 N / 5 s)
Elastic Modulus	95 – 105 GPa

Chemical Composition

Pd	1.2 % – 2.5 %
Cu Purity	99.98 % min

Other Guidelines

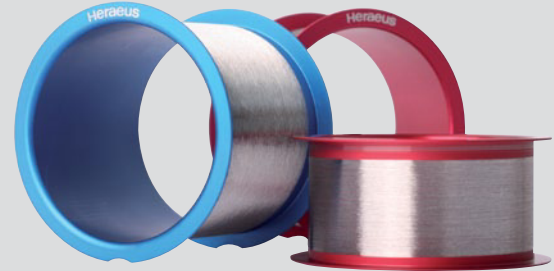
Floor Life	60 days
Shelf Life Time	6 months
Shielding Gas	N ₂ / Forming Gas

* Based on Core Material

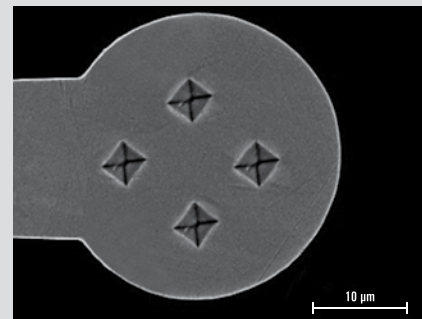
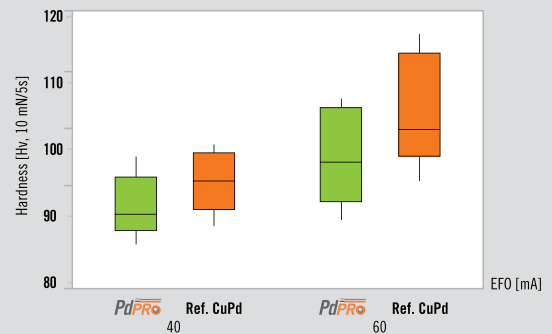
Reliability Data

Reliability	Test Conditions	Result
HAST	130 °C / 85% RH / 96 hrs	PASSED
TCT	-55 °C / 125 °C / 1000 x	PASSED
HTS	150 °C / 1000 hrs	PASSED

Device: BGA, Wire diameter: 20 µm, Ball diameter: 44 +/- 2 µm



FAB Hardness Data



Target FAB: 28 µm, Wire Diameter: 18 µm, EFO Current / Time: 40 mA / 225 µs and 60 mA / 145 µs, Bonder Type: iConn

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