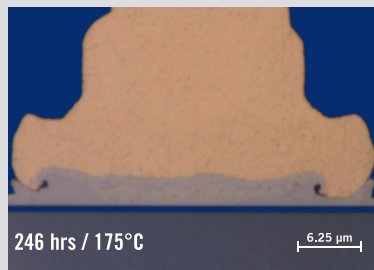
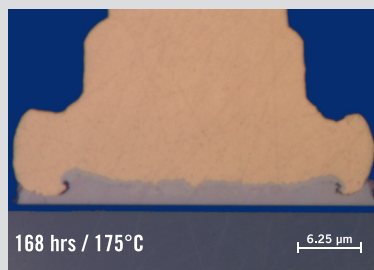
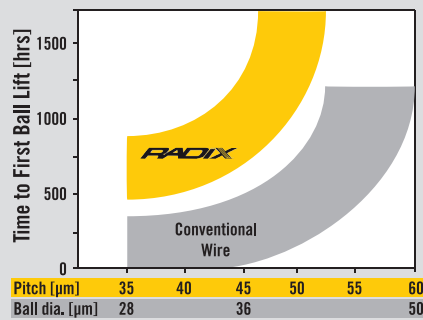


## **RADIX**

### 3N Gold Wire for Excellent Ball Bond Reliability



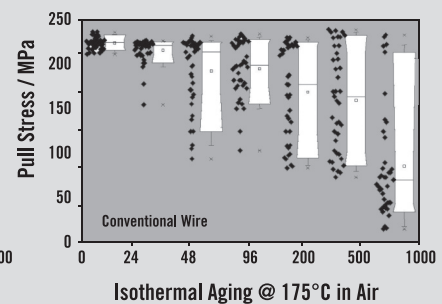
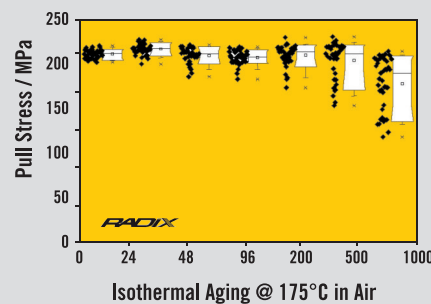
#### First Bond Reliability



#### Ultimate Intermetallic Stability for Enhanced Reliability

- Optimised composition for ultimate intermetallic stability
- Superior reliability on a wide range of aluminum bond pad composition and thickness
- Applicable in a wide range of diameters including use in high-power applications
- Low hardness FAB (free-air-ball) allows bonding on sensitive bond structures
- Uncompromised low electrical resistivity

#### Reliability Comparison



**Bonding Condition:** Metallization: 0.5% Cu, 99.5% Al · Bond pad pitch: 35 µm · Bonded ball diameter: 28 µm Wire diameter: 15 µm  
 Bonding temperature: 170°C · Capillary: K&S M14CJ-2010-Z33-KSS Atlas

#### Recommended Technical Data of **RADIX**

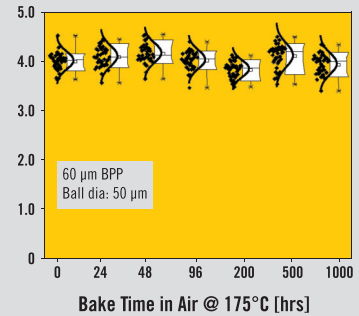
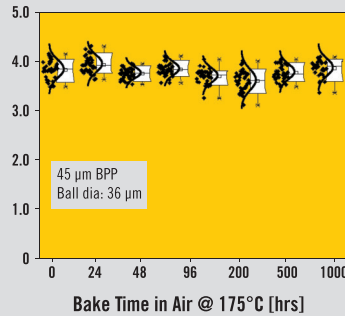
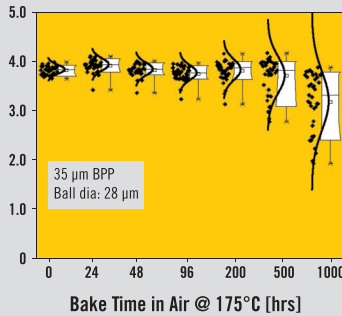
Diameter	Microns	15	18	20	23	25	28	30	32	33	35	38	50
	Mils	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.25	1.3	1.4	1.5	2.0
<b>Recommended Specs for Ball Bonding</b>													
Elongation (%)		2-6	2-6	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	2-7	4-12
Breaking Load (g)		2-5	3-7	4-8	7-12	8-13	10-15	12-17	13-21	14-22	16-23	20-28	32-46

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

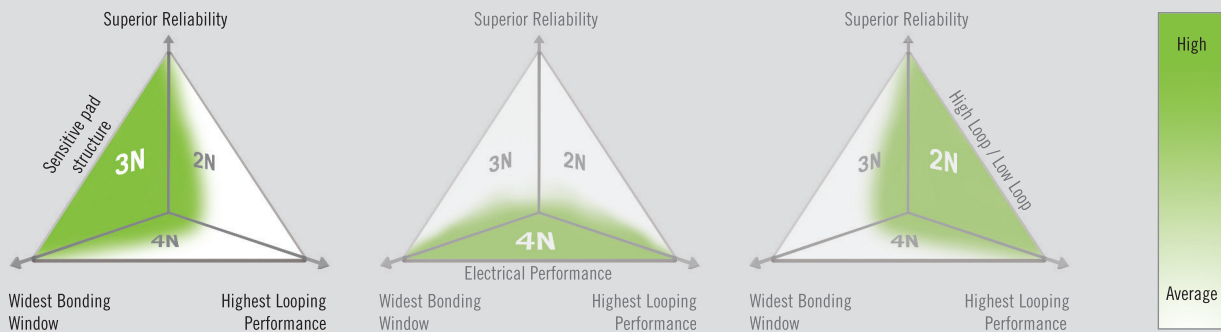
### Characteristics for 25 µm diameter

Non-Gold Elements	< 0.1%
Elastic Modulus	~ 75 GPa
Heat Affected Zone (HAZ)	50 – 170 µm
Melting Point	1063 °C
Density	19.32 g/cm <sup>3</sup>
Heat Conductivity	3.17 W/cm-K
Electrical Resistivity	2.3 µΩ-cm
Coeff. of Linear Expansion (20 – 100°C)	14.2 ppm/K
Fusing Current for 25 µm, dia 10 mm length (in air)	0.37 A
FAB Hardness	55 – 65 HV (0.01 N/5 s)

### High Reliability



### Gold Wire Segmentation by Properties



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