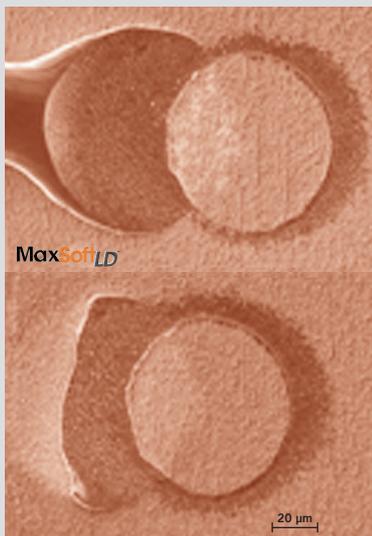
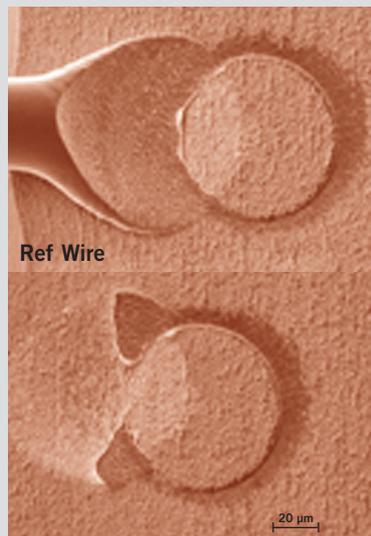


## MaxSoft<sup>LD</sup>

### Large Copper Wire Demanding 1st & 2nd Bond Applications



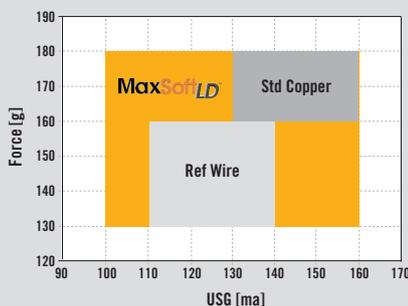
Excellent 2nd bond



#### MaxSoft<sup>LD</sup> Benefits

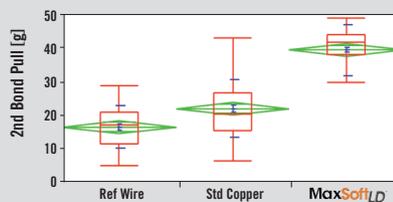
- Superior 1st and 2nd bond performance
- Soft wire characteristics enable:
  - Bonding on challenging pad structure
  - Higher stitch pull value for a stronger 2nd bond
  - Robust and wider 2nd bond process window
- High reliability wire with slow and uniform intermetallic growth
- Available in large diameters ranging from 1.5 mil to 3.0 mil (38 μm to 75 μm)

#### Wider 2nd Bond Process Window



Wire diameter: 50 μm · Device: PLCC68L Package  
 Capillary: CU-L8-1209-P37 (H2.5, CD3.1, T8.2, FA08)  
 Bonder: 8028PPS · Bonding Temperature: 220°C

#### Higher Stitch Pull Values



Wire diameter: 50 μm · Device: TSSOP Package  
 Capillary: CU-L8-1302-P37 (H2.6, CD3.7, T8.0, FA08)  
 Bonder: Maxum Plus · Bonding Temperature: 240°C

#### Recommended Technical Data of MaxSoft<sup>LD</sup>

Diameter	Microns	38	45	50	63	75
	Mils	1.5	1.8	2.0	2.5	3.0
<b>Recommended Specs for Ball Bonding</b>						
Elongation (%)		10 – 20	10 – 20	10 – 20	10 – 25	10 – 25
Breaking Load (g)		15 – 35	22 – 42	30 – 50	50 – 80	70 – 110

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

## MaxSoft<sub>LD</sub> Characteristics for 50 µm diameter wire

### Physical Properties

Density	8.92 g/cm <sup>3</sup>
Melting Point	1083 °C
Thermal Conductivity	401 W/m.K
Specific Heat Capacity @ 25 °C	385 J/kg.K
Coeff. of Thermal Expansion	16.5 µm/m °C, (20 – 100 °C)
Electrical Resistivity	1.69 µΩ/cm
FAB Hardness (120 mA EFO)	80 – 90 HV (0.02 N/5 s)
Wire Hardness	80 – 90 HV (0.02 N/5 s)
Elastic Modulus	60 – 90 GPa

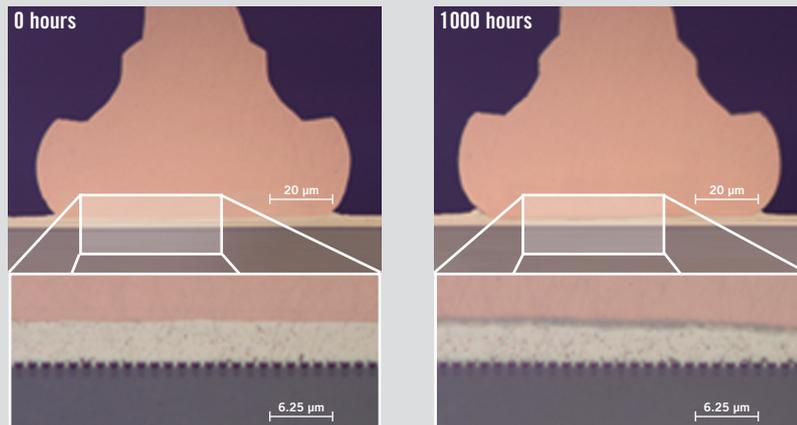
### Chemical Composition

Copper	99.99% (min)
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### Others

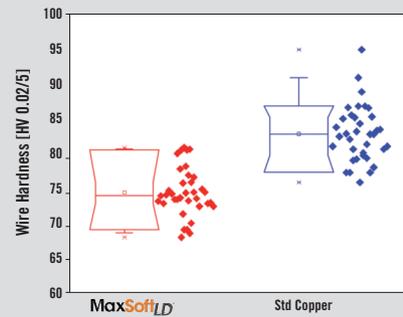
Floor Life	7 days
Shelf Life Time	6 month
Recommended Shielding Gas	Forming Gas (95%N <sub>2</sub> , 5%H <sub>2</sub> )
Bonding Temperature (Leadframe)	200 – 240 °C

## Excellent Reliability

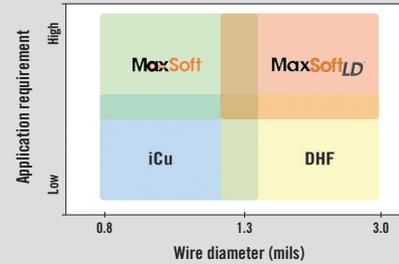


Bare die HTS @ 175 °C, diameter: 50 µm, pad thickness: 3 µm Al

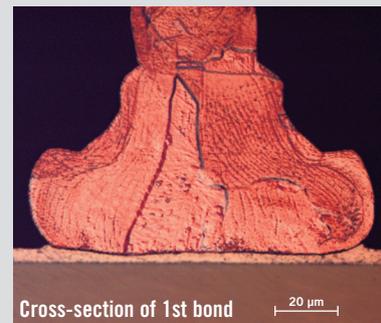
## Soft Wire Characteristic



## Copper Wire Products



## Minimum Pad Deformation



Cross-section of 1st bond  
Diameter: 50 µm, pad thickness: 3 µm Al

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