**PdFLASH**

Au Flash Pd Coated Copper Wire for IC Applications

**Benefits & Features**
- Robust 2nd bond performance
- Higher stitch pull
- Wider 2nd bond process window than CuPd wire
- Available in diameter ranging from 0.6 – 2.0 mil

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**2nd Bond Process Window**

<table>
<thead>
<tr>
<th>Diameter (µm)</th>
<th>Microns (µm)</th>
<th>15</th>
<th>18</th>
<th>20</th>
<th>23</th>
<th>25</th>
<th>28</th>
<th>30</th>
<th>33</th>
<th>38</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mils</td>
<td>0.6</td>
<td>0.7</td>
<td>0.8</td>
<td>0.9</td>
<td>1.0</td>
<td>1.1</td>
<td>1.2</td>
<td>1.3</td>
<td>1.5</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Breaking Load (g)</td>
<td>3 – 7</td>
<td>5 – 10</td>
<td>7 – 14</td>
<td>9 – 17</td>
<td>11 – 19</td>
<td>15 – 26</td>
<td>17 – 30</td>
<td>19 – 35</td>
<td>25 – 40</td>
<td>50 – 70</td>
<td></td>
</tr>
</tbody>
</table>

For other diameters, please contact Heraeus Bonding Wires sales representative.
The data given here is valid. We reserve the right to make technical alterations.

### Characteristics for 0.7 mil diameter

#### Physical Properties
- **Density**: 9.03 g/cm³
- **Melting Point**: 1081 °C
- **Thermal Conductivity**: 401 W/m·K
- **Specific Heat Capacity @ 25 °C**: 352 J/kg·K
- **Coeff. of Thermal Expansion**: 16.6 (µm/m °C, 20 – 100 °C)
- **Electrical Resistivity**: 1.8 μΩ·cm
- **FAB Hardness**: 92 – 105 HV (0.01 N/5 s)
- **Wire Hardness**: 95 – 100 HV (0.01 N/5 s)
- **Elastic Modulus**: 90 – 100 GPa

#### Chemical Composition
- **Pd + Au**: 1.5 % – 2.5 %
- **Cu Purity**: 99.98 % min

#### Other Guidelines
- **Floor Life**: 60 days
- **Shelf Life Time**: 6 months
- **Shielding Gas**: N₂ / Forming Gas

*Based on Core Material*

#### SEM-EDX Analysis

<table>
<thead>
<tr>
<th>EL [%]</th>
<th>Modulus [GPa]</th>
<th>Tensile Stress [MPa]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>8</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>10</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>12</td>
<td>120</td>
<td>120</td>
</tr>
</tbody>
</table>

**Wire diameter**: 0.7 mil

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