Copper Materials for Low Temperature Sintering

**Characteristic**

- Low temperature sintering: Sintered below 200℃
- Conductivity: Volume resistivity comparable to metallic copper
- Shear strength: Pressureless bonding in an inert atmosphere

**Conductivity**

**Paste formulation**
Cu: 90wt%
Solvent etc.: 10wt%

**Sintering conditions**
- Atmosphere: under nitrogen
- Temperature: 100~200℃ (60min)

<table>
<thead>
<tr>
<th>Temperature</th>
<th>100℃</th>
<th>150℃</th>
<th>200℃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume resistivity (µΩ・cm)</td>
<td>&lt; 300</td>
<td>&lt; 25</td>
<td>&lt; 15</td>
</tr>
</tbody>
</table>

**Shear strength**

**Bonding conditions**
- Test pieces: Cu-Cu
- Bonding pressure: pressureless
- Atmosphere: under nitrogen
- Temperature: 100℃/10min → 150 or 200℃/20min

<table>
<thead>
<tr>
<th>Temperature</th>
<th>150℃</th>
<th>200℃</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear strength (MPa)</td>
<td>&gt; 25</td>
<td>&gt; 50</td>
</tr>
</tbody>
</table>

※The listed values are based on our tests and are not guaranteed values.

ISHIHARA SANGYO KAISHA, LTD.

Ver.1