PRODUCT DATA SHEET

Eutectic Gold-Tin Solder

When to Use Eutectic AuSn Solder

- **Die-Attach**: Thermal requirements often mandate a high-melting die-attach solder. With a melting point of 280°C, eutectic AuSn often satisfies these demands.

- **High-Reliability Applications**: AuSn’s compatibility with gold metallizations, coupled with its long-term reliability, make it a good choice for high-reliability applications such as microwave systems, medical and aerospace applications, and more.

- **Lid Sealing**: AuSn’s excellent wetting properties, its relatively low-melting point (when compared to certain die-attach alloys), and its long-term reliability make this alloy desirable for lid sealing applications.

- **Braze Alternative**: Eutectic AuSn, with a tensile strength of 275MPa (40,000 pounds/square inch), provides a great alternative to brazes when high strength must be achieved at soldering temperatures.

Forms of AuSn

Indium Corporation’s eutectic AuSn solder is available in many forms, including:

- Wire
- Ribbon
- Preforms
- Solder paste

Precision wire, ribbon, or preforms are produced to exact dimensions, meeting customers’ precise demands.

Solder paste is available in a variety of parameters to address individual needs.

Solder preforms are also available in AuGe, AuSi, and pure Au.

Physical Properties

<table>
<thead>
<tr>
<th>Composition</th>
<th>80Au/20Sn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting Point</td>
<td>280°C/536°F</td>
</tr>
<tr>
<td>Density</td>
<td>14.51 grams/cm³</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>40,000psi</td>
</tr>
<tr>
<td>Shear Strength</td>
<td>40,000psi</td>
</tr>
<tr>
<td>Coefficient of Thermal Expansion</td>
<td>16ppm/°C @ 20°C</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>0.57w/cm°C @ 85°C</td>
</tr>
<tr>
<td>Young’s Modulus</td>
<td>8.57 x 10⁶psi</td>
</tr>
</tbody>
</table>

Technical Support

Indium Corporation’s internationally experienced engineers provide in-depth technical assistance to our customers. Thoroughly knowledgeable in all facets of Material Science as it applies to the electronics and semiconductor sectors, Technical Support Engineers provide expert advice in solder properties, alloy compatibility, and selection of solder preforms, wire, ribbon, and paste. Indium Corporation’s Technical Support engineers provide rapid response to all technical inquiries.

Safety Data Sheets

The SDS for this product can be found online at http://www.indium.com/sds

From One Engineer To Another

Contact our engineers today: askus@indium.com
Learn more: www.indium.com

©2017 Indium Corporation

This product data sheet is provided for general information only. It is not intended, and shall not be construed, to warrant or guarantee the performance of the products described which are sold subject exclusively to written warranties and limitations thereon included in product packaging and invoices. All Indium Corporation’s products and solutions are designed to be commercially available unless specifically stated otherwise.