# HIGH-PERFORMANCE THERMAL INTERFACE MATERIALS

**Indium Corporation** is the leader in metal thermal interface materials (TIMs).



## Heat-Spring<sup>®</sup>

A Heat-Spring<sup>®</sup> is a compressible metal interface between a heat source and a heat-sink. The surface of a Heat-Spring<sup>®</sup> is patterned to optimize performance and is ideal for TIM2 and liquid immersion cooling applications.





### Indium TIM for Burn-In

Because of its high thermal conductivity (86W/mK), indium is used for a variety of demanding burn-in and test applications. The pure indium can be clad with a thin aluminum layer on the side facing the DUT to prevent the soft metal from adhering to the surface.



## **Solder TIM Solutions**

Reflowed solder joints are also thermally conductive because of the intermetallic bond that is created. Because the material is reflowed, it will help reduce voiding, which can impede thermal conductivity.



### **Solder TIM Solutions for BGAs**

Revolutionary new manufacturing processes enable uniform distributions of IMCs ensuring consistent reflow and void performance over multiple reflow cycles.



## Liquid Metal Paste

Form No. 99541 R1

Unlike traditional gallium-based liquid metal which is prone to pump-out and typically requires specialized spreading processes, liquid metal paste has a higher viscosity that offers predictable spreading characteristics required for scalable high-volume applications.

#### Contact our engineers: jmajor@indium.com Learn more: www.indium.com/TIMs

All of Indium Corporation's solder paste and preform manufacturing facilities are IATF 16949:2016 certified. Indium Corporation is an ISO 9001:2015 registered company.

#### From One Engineer To Another

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- High in thermal conductivity
- Easy to handle—easy clean-up
- Silicone-free
- Reclaimable and recyclable
- Free from outgassing, bake-out, and pump-out
- $\bullet$  Able to compensate for up to 75  $\mu m$  of warpage
- Low cost of ownership

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