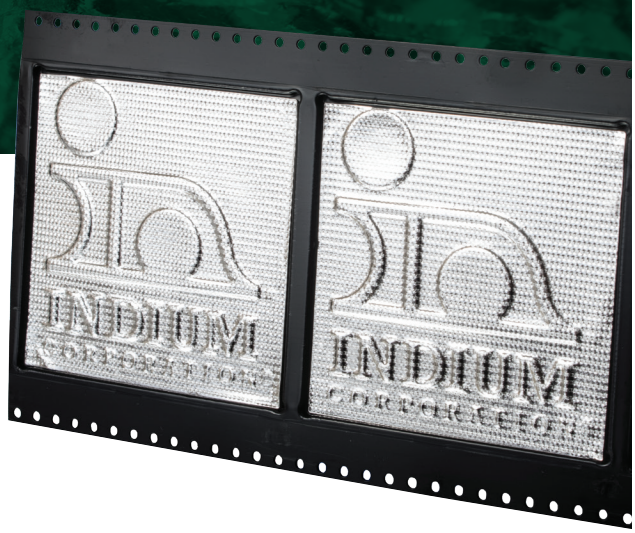
THERMAL INTERFACE HEAT-SPRING®



Recommendations (In, InSn, Sn+)

Indium Corporation's patented **Heat-Spring®** preforms improve contact between two surfaces for more uniform thermal conductivity. Each **Heat-Spring®** pattern was designed for specific applications, which are described below.

Heat-Spring® HSD

- Recommended for smaller interfaces with flat, smooth, and parallel surfaces (greater than 0.002" non-planar)
- Minimum thickness of 0.004" (100µm)

Heat-Spring® HSHP (High Profile)

- Recommended for applications that use an extruded, unfinished heat-sink, or field-fit plates that have surface scarring or machine marks
- High profile version of HSD pattern with 2X the compressibility
- Best for non-planar surfaces of 0.002" to 0.005" (50–125µm)
- Minimum thickness of 0.006" (150µm)

Heat-Spring® HSK

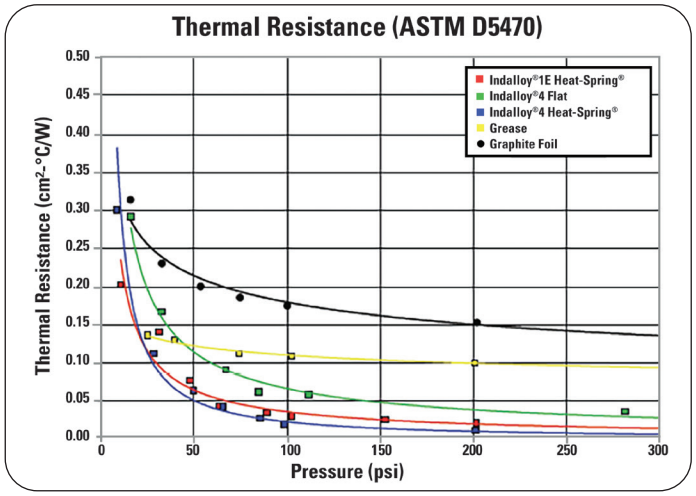
- Recommended for burn-in applications where multiple insertions are required
- Provides uniform contact with low thermal resistance for high-density heat loads
- Clad with a thin diffusion barrier that serves as the contact surface and eliminates staining and cracking
- Minimum thickness of 0.010" (250µm)

Diffusion Barriers— HSK Recommended

- Al-clad **Heat-Spring®** is best used in applications where there is sensitivity to sticking and staining
- Diffusion barrier experiences minimal deformation and serves as a planar contact barrier

Packaging

- Custom tray
- Tape & reel



Shelf Life

Shelf life is the length of time a product can be kept in storage and still retain its original solder properties.

The shelf life for Heat-Springs is two years from the date of manufacture when stored in their original sealed container in a nitrogen dry box.

Popular Alloys

Heat-Spring® is available in a variety of alloys, and these are the most popular:

- 99.99 Indium
- InSn
- InAg
- Sn+

Pressure

To optimize the contact between the two thermal interfaces, pressure is required for each of the **Heat-Spring®** patterns.

- Indium-containing alloys need a minimum of 40psi
- Sn+ needs a minimum of 100psi

Contact our engineers: **askus@indium.com**
Learn more: **www.indium.com/TIMs**

From One Engineer To Another®

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INDIUM® CORPORATION®