| Part \# | Description |
| :---: | :---: |
| TF-IF150150-010 | Pure Indium foil thermal interface material (TIM) |


| Material |
| :---: |
| $99.995 \%$ Pure Indium (4N5) |


| Dimensions |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Length |  | Width |  | Thickness |  |
| mm | in | mm | in | mm | in |
| 150.0 | 5.91 | 150.0 | 5.91 | 0.10 | 0.004 |

Indium is a unique metal with many unusual properties and uses;

- Used as a Thermal Interface Material (TIM) due to its very high thermal conductivity.
- Extremely reliable as a TIM since it has no "pump out" associated with many thermal compounds and greases.
- Soft and malleable; easily conforms to surfaces and curves.
- Remains maleable and fusible even at cryogenic tempera-
tures. Used as a cryogenic sealant and gasket.
- Wets glass and most ceramics.
- Can be used as a lead free solder.
- Completely recyclable.

Application as a TIM:

1. Cut to required size with scissors or razor. Take care as the indium foil easily tears.
2. Apply by laying foil on intended surface and rubbing into place with gloved fingers.
3. Bring 2nd surface into contact with the indium foil and maintain compression with at least 10 psi and preferrebly 75-125 psi.

|  | Properties |  |
| :--- | :--- | :---: |
| Density | $7310 \mathrm{~kg} / \mathrm{m} 3$ |  |
| Melting point | $156.6^{\circ} \mathrm{C}\left[313.88^{\circ} \mathrm{F}\right]$ |  |
| Thermal conductivity | $81.8 \mathrm{Watts} / \mathrm{m}-\mathrm{K} @ 25^{\circ} \mathrm{C}$ |  |
| Specific heat | $0.056 \mathrm{Cal} / \mathrm{g} / \mathrm{K} @ 25^{\circ} \mathrm{C}$ |  |
| Thermal expansion | $32.1 \mathrm{um} / \mathrm{m} / \mathrm{K} \mathrm{@} 25^{\circ} \mathrm{C}$ |  |
| Electrical resistivity | $8.37 \mathrm{microhm}-\mathrm{cm} @ 20^{\circ} \mathrm{C}$ |  |
| Heat of vaporization | $53.7 \mathrm{~K}-\mathrm{CaI} / \mathrm{gm}$ atom at $2080^{\circ} \mathrm{C}$ |  |
| Heat of fusion | $0.781 \mathrm{Cal} / \mathrm{gm}$ mole |  |
| PubChem CID | 5359967 |  |
| CAS Number | $7440-74-6$ |  |

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