



Solder plus Support

INDIUM

PURE INDIUM & INDIUM ALLOYS
FOR CTE MISMATCH AND THERMAL TRANSFER



INDIUM ALLOYS AT A GLANCE

- Highly malleable, low melting
- Remains workable in cryogenic temperatures
- Broad range of mechanical and melting characteristics
- Excellent fatigue resistance
- Good for use in difficult joining applications
- Can be used for non-metallic bonding

AIM offers a wide variety of indium alloys for a various applications. These are available in paste, preform, ribbon, sphere, ingot, wire and foil form.

AIM'S PURE INDIUM AND INDIUM SOLDER ALLOYS have the unique attributes of high ductility, high thermal conductivity and a low melting point. These properties make indium and indium alloys an ideal joining material for ceramic component attach to PCB's and heat spreaders. Pure indium can be used as a gasket to make cold compression bonds with no reflow required. Surfaces to be soldered must be well cleaned and heated to the appropriate soldering temperature. Typically, flux should be used; however fluxless soldering can be done via the use of mechanical scrubbing. This can be achieved by using an ultrasonic soldering tool to agitate the molten solder; metal brush abrasion can also be used.

**AIM'S MANUFACTURING FACILITIES ARE
ISO 9001/14001 & IATF CERTIFIED**

Common Alloys for Ceramic Component to Metal Joining

Alloy Composition	Ag	In	Pb	Sn	Melting Point °C
Pure Indium		99.99	15		142-149
97In/3Ag	3	97			146
80In/15Pb/5Ag	5	80	15		148-149
More Available Indium Alloy Compositions from AIM					
52In/48Sn		52		48	118
70In/30Pb		70	30		165-175
60In/40Pb		60	40		173-181
50In/50Pb		50	50		178-210
40In/60Pb		40	60		195-225
30In/70Pb		30	70		245-260
26In/37.5Sn/37.5Pb		26	37.5	37.5	134-181
25In/75Pb		25	75		250-264
20In/54Sn/26Pb		20	26	54	130-154
19In/81Pb		19	81		270-280
5In/2.5Au/92.5Pb	2.5	5	92.5		300-310