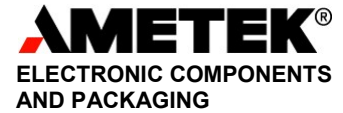




15 Mercedes Drive
Montvale, NJ 07645 U.S.A.
Telephone: 201.791.4020
Fax: 201.791.1637
www.coininginc.com



DATA SHEET: Pb75In25

Physical Properties of Bulk Solder

Solder Alloy Composition	75% Lead-25% Indium (weight per cent)
Solidus	250°C
Liquidus	264°C
Density	9.97 Mg/m ³
Coefficient of Thermal Expansion	24.9 x 10 ⁻⁶ K ⁻¹
Thermal Conductivity	45 W m ⁻¹ K ⁻¹ (est.)
Electrical Conductivity	11.5% IACS (est.)
Electrical Resistivity	14.99 μΩ cm (est.)

Typical impurity levels for electronic grade are less than:

Au: 0.05	Cu: 0.08	Ni: 0.01	Al: 0.005
Bi: 0.10	Fe: 0.02	Zn: 0.003	As: 0.03
Cd: 0.002	Sn: 0.10		

Applications: Pb,In-based solders are used for their increased thermal fatigue properties, compared to regular Pb,Sn-based solders. They are also applied in cases where scavenging and/or leaching of Au-coatings must be avoided. The In-based solders do have a good resistance to alkaline corrosion. However, corrosion resistance in presence of traces of halide ions is unsatisfactory, necessitating the use of hermetic seals or conformal coatings.

Temperature profile: Soldering temperature for reflow should be minimal at or above 300°C for a minimal time of 60 seconds. This assumes either very clean, soldering surfaces and an inert or reducing atmosphere or the presence of a deoxidizing agent/flux during the soldering cycle. If and when the components are slightly oxidized, a combination with higher temperatures and/or longer soldering temperatures is required. For more oxidized surfaces, an appropriate flux must be used.

The information contained herein is based on data considered accurate and is offered at no charge. No warranty is expressed or implied regarding the accuracy of this data. Liability is expressly disclaimed for any loss or injury arising out of the use of this information or the use of any materials designated.