



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



ELECTRONIC COMPONENTS
AND PACKAGING

Data Sheet: Lead97.5- Silver2.5

Physical Properties of Bulk Solder

Solder Alloy Composition	Pb97.5Ag2.5 (weight per cent)
Melting point	304°C
Density	11.32 Mg/m ³
Thermal conductivity	0.27 W/cm K ⁻¹
Electrical conductivity	7.4% IACS
Coefficient of Thermal Expansion	≈25.0 x 10 ⁻⁶ K ⁻¹
Tensile strength	35 MPa
Hardness	13 HB

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		

Application: In comparison with conventional tin-lead solders, the high-lead based solders have improved thermal fatigue characteristics, and they greatly reduce the scavenging of gold surfaces. The temperature range is wide enough to permit two- or even three-step soldering. The 2.5% Ag solder is a high-temperature silver-bearing solder with good thermal fatigue properties. Due to the absence of Sn, the applicability of the alloy for soldering is limited to mainly; Ag-, Au- and Cu-based substrates. Special care should be taken to protect the solder against humidity and high temperatures. The material reacts quickly forming a mixture of lead oxides and/or lead hydroxides. Proper temperature- and humidity control will extend the shelf life of stocked parts. Packaging of stocked parts must be closed and include an active desiccant.

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.