



RoHS Compliance and SHP Products.

RoHS stands for Reduction of Hazardous Substances, it is Directive (RoHS) 2002/95/EC which was adopted in February 2003 by the European Union. The RoHS directive took effect on July 1, 2006. RoHS limits the amount of 6 different substances allowed by weight in a homogeneous material. For our purposes two of the six substances are of interest, lead (Pb) and cadmium (Cd). Under RoHS requirements a maximum of .1% by weight (1,000 ppm) of lead is allowed and a maximum of .01% by weight (100 ppm) of cadmium is allowed.

SHP recommends tin based soft solders for installing our products. Specifically Sn63, Sn96 and Sb5 are recommended. They have the necessary strength and ductility characteristics to create high reliability joints with SHP products. Of the three recommended solders, Sn63 is not RoHS compliant due to it's high percentage of lead, it has 37% lead. Sn96 and Sb5 are both RoHS compliant.

SHP recommends the use of electroless nickel as an underplate prior to tin, silver or gold overplate. Historically electroless nickel deposits have contained lead and cadmium since these metals were present in the bath for functional reasons. The lead compound is used as a bath stabilizer so that the autocatalytic nature of the bath can be controlled to the surface intended for the deposit. The cadmium compounds were there to provide an improved brightness characteristic to the deposit. The electroless nickel bath that has been used by SHP for the -01 and -02 plating codes for many years pre-dating the RoHS directive as well as some of the other electroless nickel based plating sequences has been found to have Cd in excess of the 100 ppm max. The Pb content is below the 1,000 ppm maximum. We have chosen to continue with the same electroless nickel bath for the consistency that our 20+ year customers have come to expect from us. For customers that request RoHS compliance we have some alternate bath choices that have been well proven for performance in hermetic service requirements. The RoHS compliant electroless nickel coatings we have available have the same performance characteristics for adhesion and solderability as the non-RoHS compliant version we use. Alternate plating codes are assigned to products for which RoHS compliance is required to ensure that RoHS compliant electroless nickel baths are used.

Please indicate when you are requesting a quotation and placing an order that RoHS is a requirement so that we can ensure the correct plating baths are used and that the plating code is correct.