

Curtiss-Wright Embedded Computing (CWEC) Responds to RoHS (Restriction of the Use of Certain Hazardous Substances) and WEEE (Waste from Electric and Electronic Equipment) Directives

In response to the RoHS and WEEE directives from the European Union (and the associated deadline of July 1, 2006), CWEC recognizes that continuing to ensure our products meet our customer's stringent reliability standards is of paramount importance. As a result, our Ottawa manufacturing facility that supports our Virginia, San Diego and Ottawa product lines will continue to produce all existing products with a SnPb manufacturing process, to ensure we can guarantee the reliability of our products in the extreme application environments so commonly found in the Military and Aerospace markets. Any questions regarding what products are applicable here should be directed to the Program Management team in Ottawa, Canada.

Over the past year, CWEC has conducted research into the potential of offering a commercial-grade lead-free (PbFree) product in compliance with the WEEE and RoHS directives. In advance of this, customers requiring a PbFree solution are invited to contact the CWEC Program Management team in Ottawa, Canada to discuss the possibility of a solution specific to their needs.

Currently, CWEC is investing time and resources that focus on three major PbFree areas:

Components

CWEC is working closely with our component suppliers to create a controlled environment that ensures the proper usage and identification of SnPb and PbFree components in our Engineering CAD and MRP parts databases. CWEC employs a very comprehensive and proven Obsolescence Management system (in place for over 20 years now) that tracks product and process change notices for components. Internally, we conduct weekly obsolescence reviews and institute mitigation practices that are traced and monitored for all CWEC sites.

Reliability

CWEC has an active Solder Joint Reliability (SJR) program that assesses different technologies including the reliability of SnPb re-balled parts. We are also intimate with the industry activities that address the controlled introduction and mitigation practices of PbFree in Defense and Aerospace applications. Areas of control include: Project Management, Tin Whiskering, Re-balling, and Solder Dipping practices. PbFree finishes have been used on numerous passive components over the past 10 years and have proven to be reliable, so we will continue to permit this practice. We are taking proactive steps to ensure that component lead finishes which are deemed incompatible with a SnPb manufacturing process are not utilized.

Manufacturing Process

CWEC Operations Engineering is evaluating the process changes needed to support SAC305 with silver and gold-finish PWBs. This entails profile development for the reflow oven, as well process changes needed to clearly segregate and identify PbFree products on the production floor. Complex rework and 2nd stage assembly processes are also being investigated to determine what needs to be changed to accommodate PbFree manufacturing. Currently, we are targeting SMT processes.

As we move into the future, CWEC will be monitoring the several industry standards groups who are addressing the impact of PbFree. In addition, our Engineering Services Group will continue to be actively involved in the Lead-Free Electronics in Aerospace Project (LEAP). This is an international working group that includes over 20 companies from the aerospace industry, along with AIA, ARINC, CALCE, DOD and the FAA. Currently, CWEC is the only Hi-Reliability COTS vendor that is a member of the LEAP Working Group. We expect these standards to be adopted by many Defense and Aerospace companies.

As new research becomes available, Curtiss Wright Embedded Computing will evaluate and determine their applicability to our products and technology offerings, to ensure that we continue to deliver the highest reliability products and technologies that our customers deserve.