

## **RoHS Compliance and Lead-free Products Statement (Issue November 2005)**

Under the legal constraints of the European legislation, namely

- Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)
- Commission Decision of 21 October 2005 amending for the purpose of adapting to technical progress the Annex to Directive 2002/95/EC ... (RoHS)...
- Directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE)

and the world-wide initiatives for lead-free products and for the reduction of hazardous waste, AXTAL is committed to comply to these requirements with its product and production processes taking into account the July 2006 RoHS deadline.

AXTAL plans to achieve RoHS compliance in accordance with IPC/EIA J-STD-006 by

- replacement of Pb-based solder with the lead-free alternatives, preferably SnAgCu (SAC),
- procuring RoHS compliant components to replace all components with lead-based terminations
- replacing lead-based finishes on PCB, packages and on its terminals

In conjunction with the RoHS compliance AXTAL intends to offer product that is compatible with the higher temperature requirements of lead-free products, namely capable of surviving peak reflow temperatures to 260°C, depending on the product geometry as defined in IPC/JEDEC J-STD-020C and in IEC 68068-2-58.

### **EXEMPTIONS**

The exemptions stated in the Annex of the Directive 2002/95/EC, and its amendments by EU Commission Decision of 21 October 2005, allows (amongst others) lead in solders for network infrastructure equipment, and lead in electronic ceramic parts (e.g. piezoelectric devices). For military and space products lead-based packaging technologies will also to be allowed in the near future due to concerns with Pb-free alternatives.

AXTAL respects such demands to waive RoHS compliance requirements where – and as long as – practical.

## TRANSITION PERIOD

### Crystal units and sensor elements

All crystal units and resonant sensor elements including quartz, Langasite (LGS), and Gallium phosphate (GaPO<sub>4</sub>) resonators are already 100% RoHS compliant at the issue date of this document. Ceramic packaged components make use of the exemption point 7.

### Oscillators, Filters, Modules

A number of AXTAL products are already RoHS-compliant (Pb-free). Unless customers require an immediate re-design of certain products to comply with RoHS, AXTAL performs the transition to full RoHS compliance in several steps, product family by product family. The transition of a product to an equivalent RoHS-compliant version can be identified by the date code of cut-over. No special marking on the product will be provided.. In the transition period till July 2006, RoHS-compliant parts are marked with a “Pb-free” label attached on the packing, as depicted.



For questions on a particular product or part number, or for additional information regarding this notification, please contact AXTAL under [info@axtal.com](mailto:info@axtal.com).

The full text of the mentioned European Directives can be found on the AXTAL website [www.axtal.com](http://www.axtal.com) under “Technical Notes.