

Addressing Environmental Preservation through Our Products

Eliminating Lead

Eliminating Lead from Products

Murata's efforts to reduce lead have been implemented according to the product regulation program for environmentally hazardous substances in products. Specifically, in 1995 we established the "Lead-Free Solder Project," an initiative intended to introduce lead-free solder that was undertaken by our Technical Development Department and the Product Planning and Design Department.

The Lead-Free Solder Project

Within the electronic component industry, demand has been increasing for a lead-free approach, particularly through initiatives such as green purchasing, product assessment activities, lead-free solder assembly by electronic equipment manufacturers, and the WEEE*¹ and RoHS*² drafts of the EU directives.

Murata has long promoted numerous lead-reduction measures. Murata has made significant progress in its lead reduction efforts, including elimination of lead from the plating of terminals and from the surface of soldered terminals. Then, we began supplying lead-free and lead-reduced products to the market.

Murata's approach to reducing the lead content of its products largely addresses the following three categories of lead-containing parts.

*1 WEEE(Waste Electrical and Electronic Equipment)

*2 RoHS(The restriction of the certain hazardous substances in electrical and electronic equipment)

1. Elimination of lead from terminal plating and solder on terminal surfaces

We started supplying products that use lead-free materials in plating and solder on terminal surfaces in April 2001. As of the end of March 2002, we had completed the preparation of substitutes for 75% of our products. We will complete the substitution for all our products by the end of December 2003.

2. Reducing lead used for solder in products, for glass in electrode materials, and in stabilizers for polyvinyl chloride etc

Working in cooperation with our suppliers, we intend to reduce or substitute the lead content in these areas by the end of December 2003. As for the glass used in October 1997 for thick film electrode materials, 23% of the thick film materials contained lead. But we have completed development of lead-free materials for all but 4% of the thick film electrode materials as of the end of March 2002.

3. Research on the substitution of the lead contained in ceramics and some glass materials and research on alloys with lead-free materials

The present draft of the RoHS directive exempts the lead used in these parts from the ban, because it is technically difficult to substitute the lead in such parts with other materials. However, Murata will continue to review possible lead elimination from such parts through the research and development of relevant technologies.

Moreover, the technologies developed through the lead-free efforts were actively put into practice, applied patent, and some are licensed to other parties.

Examples of lead-free products

