

FOR IMMEDIATE RELEASE

**Representative Organizations from Japan, United States and Europe
Begin Preparing the *World Lead-free Soldering Roadmap*
and Agree to Eliminate Lead by 2005**

TOKYO, DECEMBER 17, 2002 ... Representative organizations from Japan, North America and Europe held the second meeting of the Lead-free World Summit in Tokyo on November 19, 2002, and agreed on the framework for the *World Lead-free Soldering Roadmap*. According to the *Roadmap* framework, average companies in the electronic industry will halt usage of lead soldering materials by 2005. The members of the Summit are the Japan Electronics and Information Technology Industries Association (JEITA) as the representative from Japan, the National Electronics Manufacturing Initiative, Inc. (NEMI) from the United States, and SOLDERTEC at Tin Technology Ltd. from Europe.

In electronics equipment and electrical machinery systems, lead soldering materials have been widely used to fix integrated circuits (ICs) on printed wiring boards (PWBs) and other electronic components, and in circuit connectors within electronic components. However, in recent years the environmental impact of lead has become apparent, and the presence of lead in PWBs has been a major hurdle in disposing of and recycling electronic equipment. In Europe, where a law on the Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) has been under deliberation between the European Parliament and the EU Ministerial Council, it has been agreed that these regulations should take effect from July 1, 2006. The agreement by the organizations in Tokyo reflects these moves in the public and private sectors.

For the shift of equipment and packaging manufacturers to lead-free, it is necessary for assembly manufacturers to deal with such issues as improving the heat resistance of electronic components and achieving lead-free electrodes and terminals within these components. For this reason, a harmonized approach is required by equipment, mounting, electronic component and soldering materials manufacturers. Furthermore, to realize the elimination of lead in the increasingly global assembly, component and device industries, a globally promoted initiative is needed. A *World Lead-free Soldering Roadmap*, which includes a timetable for the realization of lead elimination, has therefore become a necessity.

The first steps in preparing the *Roadmap* were taken in mid-December 2001, when organizations preparing *Roadmaps* for each of their regions met in Makuhari, Japan for the first Lead-free World Summit. At this meeting, the organizations agreed to unify their terminology, expressions, and formats to simplify comparisons between individual

Roadmaps and make a global *Roadmap* possible. At the second meeting of the Summit, the organizations brought versions of their Roadmaps prepared based on the previous year's agreement, and work was begun on the *World Lead-free Soldering Roadmap*. The framework will be developed in future to consider additional details as appropriate.

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For further information, please contact the Communications Group of JEITA, at 03-3518-6424 or comm@jeita.or.jp by e-mail.

Framework of the *World Lead-free Soldering Roadmap*

1) General View of “Lead-free”

There is a recognized need to have a definition for lead-free. There is still some debate over the exact value. However, there is a general view that European legislation and the JEITA roadmap will use a target of 0.1wt percent.

2) Milestones in Lead Elimination

The following schedule has been set as an average for manufacturers.

Components: Commenced supplies of lead-free components/lead-free terminal components: by the end of 2001

Complete lineup of lead-free terminal components: by the end of 2003

Complete lineup of lead-free components: by the end of 2004

Equipment: Commence manufacturing of lead-free soldering assemblies: by the end of 2002

Complete lead elimination from products: by the end of 2005

Leading manufacturers will achieve these results one year ahead of this schedule, other manufacturers two years later.

3) Lead-free Solder Alloy Selection

The type of solder composed of Sn-Ag-Cu is recommended for board assembly.

4) Compatibility with Existing PWBs

Lead-free solder technology has been shown to be compatible with existing PWBs.

5) Identification of Lead-free Material Contents

Identification of material contents is needed for rework and/or recycling; further work is required to develop a recommended system for labeling.