Pb-Free and Green Package

Status and Quality Plans

INTRODUCTION

A US based organization – NEMI (National Electronic Manufacturing Initiative) formed a task force in early 1999 to initiate the Lead-free assembly by 2001, and achieve total lead elimination by 2004. On Jan 27th, 2003, EU passed two Directives – the Restriction of the use of certain Hazardous Substances (RoHS) in electrical and electronic equipment and Waste Electrical and Electronic Equipment (WEEE). From August 13th, 2005 onwards, under these Directives, producers are required to finance the collection, treatment, recycling, and recovery of all WEEE. Beginning July 1, 2006, Electrical and Electronic Equipment will no longer be sold in EU if it contains Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr+6), Polybrominated Biphenyls (PBB), and Polybrominated Diphenyl Ethers (PBDE) if exceeding the prescribed concentrations.

The semiconductor industry has developmental activities to implement remedial steps in the elimination of lead from terminal coatings used to solder devices to PC boards. Use of a new tin compound plating material has necessitated the use of different mold compounds and die attach epoxies that will maintain equal or improved device package integrity when solder temperatures of 255º C or more are used for processing the newly plated devices. IC packages produced with "Green" package raw materials (includes lead frame, epoxy and molding compound.) will continue to meet Green/ROHS requirements.

Pb-FREE/ "GREEN" PACKAGE DEFINITION

Lead (Pb)-Free package: Lead-Free or Pb-Free mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperature (> 255º C), Pb-Free products are suitable for use in specialized Pb-free process.

Restriction on Hazardous Substances Include:

- Pb (Lead) < 0.1% by weight at raw homogeneous material level
- Cd (Cadmium) < 0.01% by weight at raw homogeneous material level
- Hg (Mercury) < 0.1% by weight at raw homogeneous material level
- Cr+6 (Hexavalent Chromium) < 0.1% by weight at raw homogeneous material level
- PBB & PBDE < 1000 ppm by weight at raw homogeneous material level.
- Green package: We define "Green" to mean Pb-free and uses package materials that do not contain halogens, including bromine(Br) or antimony (Sb) above 0.1% of total product weight.

PRODUCTION AVAILABILITY

PhaseLink Corporation already uses Green packaging for all its production orders.

PRODUCT IDENTIFICATION

Please contact your local PhaseLink Corporation Sales/Marketing if you have any questions about our Pb-free quality plan to use environmentally safe materials. Customer comments and questions on our "Green Packaging Program" are welcomed and should be addressed to:

PhaseLink Corporation
47745 Fremont Blvd. Fremont, CA 94538
Phone: (510) 492-0990
Fax: (510) 492-0991
Email: Salesinfo@phaselink.com

IMPORTANT NOTICE

PhaseLink Corporation does not perform solderability test in house. The Green package soldering is evaluated based on the data conducted by our subcontractor.
PhaseLink Corporation does not perform tin whisker test in house. The Green package tin whisker is evaluated based on the data conducted by our subcontractor.
Tin whisker criteria: < 50um