

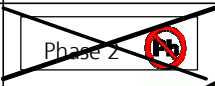








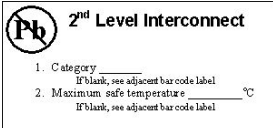





Marking - Comparison of Standards or Guidelines

Category	Soldertec/BeCAP ★	JEITA ET-7001	IPC-1066 / JESD97
Limitation	Lead-free, Mercury-free, ... : tolerance up to maximum concentration value (MCV) < 0,1 (0,01) wt% in homogeneous material	Non-presence means < 0,1 (0,01) wt% in the uniform substance or uniform material	Pb-free means < 0,1wt% in raw materials, process ready, reference to RoHS
Exemptions	Annex 1, Scope Art. 2 (1)	Like RoHS (without date)	Without reference
Lead-free Phases	Phase 1 - LF processable Phase 2 - LF terminals and solder Phase 3 → 3A - RoHS compliance Phase 4 → 3 - LF at all	No more phases, only presence or non-presence of a (RoHS) substance	- 2nd level interconnect - Totally Pb-free
Solder Material	SnAgCu ↔ A40C5 SnZnBi ↔ Z80B30 (see IEC 61190-1-3 or ISO 9453)	SnAgCu ↔ A40C5 SnZnBi ↔ Z80B30 It displays at the main unit and the wrapping material	Solder symbol (e1, e2,..) for solder classes e1 - SnAgCu   e2 - other SnX, no Bi, no Zn e3 - Sn e4 - preplated(Ag, Au, NiPd, NiPdAu) e5 - SnZn, SnZnX, no Bi e6 - Bi e7 - low temp. Solder (only JESD97)
Board – Substrate	Lead-free per order presumed	Lead free presumed	Pb free presumed IPC : HF = Halogen fr HF/e1/e2/XY
Component	 no more required  Phase 3A exemptions to be marked >> #7-2006 << or Hg: #1...#4, Pb: #5...#7, Cd:#8, Cr(VI):#9  Phase 3 	Lead presence: [[Pb]] or  Non presence: [[G]] or  Presence of other materials from Annex 1 (equivalent to RoHS) [[Hg]], [[(PDPE)]], ...  	Solder symbol  2nd l. i. label or barcode 
Assembly			Solder symbol 2nd level  Totally interc.  Pb-free label 
Process Parameters	Recommended: MSL, MST	None	For components: MST
Material Declaration	Not required, solder recommended for service	For solder, terminals and board finishes with the chem. formula	For substrates, solder material, conf. finish with categories
Benefits	Changes in exemptions are traceable, support to service	Material declaration makes boards easier to recycle, all RoHS-Materials	Other restrictions like Halogen- free (HF) (only IPC) included