

RoHS: What is it?

- European Union (EU) environmental legislation about the **RESTRICTION of the Use of certain HAZARDOUS SUBSTANCES** (RoHS) in electrical and electronic equipment
- Member States shall ensure that, from 1 July 2006, new electrical and electronic equipment put on the market does not contain
 - Lead (Pb),
 - Mercury (Hg),
 - Hexavalent Chromium (Cr),
 - Cadmium (Cd),
 - Polybrominated biphenyls (PBBs) and
 - Polybrominated diphenyl ethers (PBDEs)

RoHS: Affected products of the RENATA portfolio

Coin cell holders



Tabbed coin cells



The pre-tinning of the solder contacts (used to) contain some lead

Now they are
(about to be) **leadfree**

Batteries (incl. coin cells)



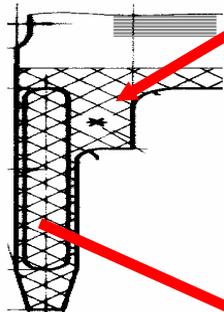
Batteries do not fall under the RoHS 2002/95/EC regulations

Batteries are governed by the

Battery Directive
1991/157/EEC

RENATA
batteries
comply with
this directive

**DETAIL OF
SOLDER PIN**



Base material

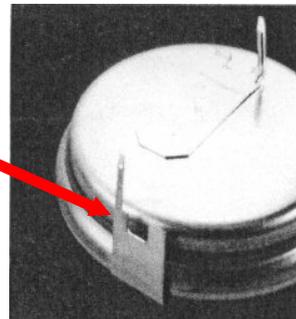
Nickel plated stainless steel:
Nickel layer of 0.2µm

Former tinning:

SnPb 90/10, 10µm
Tin content 90%
Lead content 10%

New tinning:

Sn 100, 10µm
Tin content 100%
Lead content 0%



RoHS: Material change in tabbed CC and holders

- Former tinning was lead containing:

SnPb 90/10

- Melting point: *223 °C*

- Reflow limits for SMTU-holders:

10 sec/270 °C peak temperature

- New tinning is now lead-free*:

Sn 100 matte

- Melting point: *232 °C*

- Reflow limits for SMTU-holders:

10 sec/270 °C peak temperature



* Tin whisker risk depends on the used solder.
Recommendation: SnAg(3%-4%)Cu(0.1%-1%)

List of affected standard products



Old article description	New article description	New Article / order number	Samples availability
Batteries with welded tabs:			
CR1025FV	CR1025FV-LF	701060	week 49 / 2004
CR1025FV1	CR1025FV1-LF	701061	week 49 / 2004
CR1216FH	CR1216FH-LF	701062	week 49 / 2004
CR1220FH	CR1220FH-LF	701063	week 49 / 2004
CR1220FV	CR1220FV-LF	701064	week 49 / 2004
CR1225FH	CR1225FH-LF	701065	week 49 / 2004
CR1225FV	CR1225FV-LF	701066	week 49 / 2004
CR1620FH	CR1620FH-LF	701067	week 49 / 2004
CR1620FV	CR1620FV-LF	701068	week 49 / 2004
CR1632FH	CR1632FH-LF	701069	week 49 / 2004
CR1632FH1	CR1632FH1-LF	701070	week 49 / 2004
CR1632FV	CR1632FV-LF	701071	week 49 / 2004
CR2016FH	CR2016FH-LF	701072	week 49 / 2004
CR2025FH	CR2025FH-LF	701073	week 49 / 2004
CR2025FH1	CR2025FH1-LF	701074	week 49 / 2004
CR2025RH	CR2025RH-LF	701075	week 05 / 2005
CR2025RV	CR2025RV-LF	701076	week 05 / 2005
CR2032FH	CR2032FH-LF	701077	week 49 / 2004
CR2032FH1	CR2032FH1-LF	701078	week 49 / 2004
CR2032FV	CR2032FV-LF	701079	week 49 / 2004
CR2032RH	CR2032RH-LF	701080	week 05 / 2005
CR2032RH1	CR2032RH1-LF	701081	week 05 / 2005
CR2032RH2	CR2032RH2-LF	701082	week 05 / 2005
CR2032RV	CR2032RV-LF	701083	week 05 / 2005

Old article description	New article description	New Article / order number	Samples availability
Batteries with welded tabs:			
CR2320FV	CR2320FV-LF	701084	week 49 / 2004
CR2325FH	CR2325FH-LF	701085	week 49 / 2004
CR2325FV	CR2325FV-LF	701086	week 49 / 2004
CR2325RH	CR2325RH-LF	701087	week 05 / 2005
CR2325RV	CR2325RV-LF	701088	week 05 / 2005
CR2430FH	CR2430FH-LF	701089	week 49 / 2004
CR2430FH1	CR2430FH1-LF	701090	week 49 / 2004
CR2430FV	CR2430FV-LF	701091	week 49 / 2004
CR2430RH	CR2430RH-LF	701092	week 05 / 2005
CR2430RH1	CR2430RH1-LF	701093	week 05 / 2005
CR2430RV	CR2430RV-LF	701094	week 05 / 2005
CR2450NFH	CR2450NFH-LF	701095	week 49 / 2004
CR2450NFV	CR2450NFV-LF	701096	week 49 / 2004
CR2450NRH	CR2450NRH-LF	701097	week 05 / 2005
CR2450NRH1	CR2450NRH1-LF	701098	week 05 / 2005
CR2450NRV	CR2450NRV-LF	701099	week 05 / 2005
CR2477NFH	CR2477NFH-LF	701100	week 49 / 2004
CR2477NFV	CR2477NFV-LF	701101	week 49 / 2004
CR2477NRH	CR2477NRH-LF	701103	week 05 / 2005
CR2477NRV	CR2477NRV-LF	701104	week 05 / 2005

List of affected standard products



OLD article number	Old article description	New article description	New Article / order number	Samples availability
Holders through-hole				
700447	HU1225-1	HU1225-LF	701105	week 49 / 2004
700634	HU1632-1	HU1632-LF	701131	week 49 / 2004
700448	HU2032-1	HU2032-LF	701106	week 49 / 2004
700449	HU2430-1	HU2430-LF	701107	week 49 / 2004
700450	HU2450N-1	HU2450N-LF	701108	week 05 / 2005
700451	HU2477N-1	HU2477N-LF	701109	week 05 / 2005
700760	HU357-1	HU357-LF	701133	week 49 / 2004
700463	NH5077	NH5077-LF	701111	week 05 / 2005
700813	NL5077	NL5077-LF	701112	week 05 / 2005
Holders surface-mount technology				
700568	SM2X2016-1	SM2X2016-LF	701113	week 05 / 2005
700475	SMTU1220-1	SMTU1220-LF	701114	week 49 / 2004
700476	SMTU1225-1	SMTU1225-LF	701115	week 49 / 2004
700633	SMTU1632-1	SMTU1632-LF	701130	week 49 / 2004
700477	SMTU2032-1	SMTU2032-LF	701116	week 49 / 2004
700478	SMTU2430-1	SMTU2430-LF	701117	week 49 / 2004
700479	SMTU2450N-1	SMTU2450N-LF	701118	week 49 / 2004
700480	SMTU2477N-1	SMTU2477N-LF	701119	week 05 / 2005
700761	SMTU357-1	SMTU357-LF	701132	week 49 / 2004

Important note concerning batteries and RoHS and WEEE:

As batteries have to be removed from any separately collected WEEE, the question arises to what extent the WEEE and RoHS Directives apply to batteries and whether batteries containing, e.g., mercury, lead or cadmium can be used in such new equipment from 1 July 2006.

The Battery Directive 91/157/EEC specifically mentions in its Article 9: "Member States may not impede, prohibit or restrict the marketing of batteries and accumulators covered by this Directive [...]"

This is confirmed by the RoHS Directive which explicitly mentions in recital 9 that it applies without prejudice to the Battery Directive. This means that the Battery Directive remains applicable to batteries even when used in applications falling within the scope of the RoHS Directive.

The marketing restriction, as provided for in the RoHS Directive 2002/95/EC on new equipment, does not apply to batteries used with or incorporated in electrical and electronic equipment.

The WEEE Directive applies to spent batteries collected together with WEEE and requires their removal and separate collection. Once removed, spent batteries are governed by the Battery Directive.

Therefore, batteries containing lead or cadmium, as well as button cells with a mercury content of no more than 2% by weight can be used in electrical and electronic equipment after 1.7.2006. This applies to individual cells, battery packs or batteries attached to the equipment (i.e. soldered to parts of the equipment).

Batteries fall under the battery directive 1991/157/EEC.