

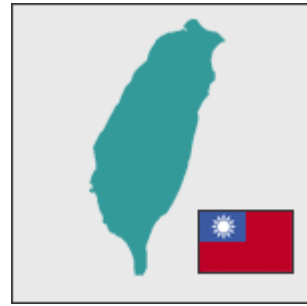
RoHS & SCM: Taiwan update

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- RoHS preparedness survey
- Case study: a leading OEM/ODM

Are Taiwanese companies ready?



Survey conducted by Corporate Synergy Development
Centre (ROC) end 2005

Main conclusions:

- Most companies are aware of the seriousness of the RoHS bans, but only 43% of them are confident to meet the requirements by the end of 2005.
- Most companies think they are OK, if they do not export products to EU countries.
- 43% of companies have mixed production lines and 46% have mixed storage areas, although international clients prohibit these practices.
- About 90% of companies ask their suppliers to provide affidavits on absence of RoHS substances.



- About 80% of companies have received demands from clients to provide affidavits on absence of RoHS substances.
- If non-compliance occurs, about 40% of companies will temporarily stop production.
- Most companies have little control over their subsidiaries.
- Most companies wish to get consultancy services and training from the government.



1. Are you aware of the RoHS Directive and its effective date??

Yes 94.7% No 5.3%

2. Which management tool do you use to cope with RoHS??

- ISO 14001 51.5 %
 - Eco-design 45.5 %
 - Green Purchasing 58.7%
 - Cleaner Production 50.1%
 - Green Marketing 15.0 %
 - Others 7.0%
- ⇒ 9% uses nothing

3. Have you established Internet-based tools for contacts with your suppliers?

Yes 51% No 49%



4. Do you have at least one designated person responsible for RoHS?

Yes 93% No 7%

5. Have you provided training to staff and/or suppliers on RoHS?

Yes 67% No 33%

6. How do you change your production lines to cope with RoHS?

- Totally changed 42.5%
- Special line for export to EU 14.7%
- Mixed lines but with different product identifications 42.8%



7. Do you have separate storage areas for RoHS compliant products?	Yes 54% No 46%
8. How many different component suppliers do you have?	< 10 - 11% 10 / 99 - 26% 100 / 999 - 33% > 1000 - 2%
9. Do you ask your suppliers for affidavits on absence of RoHS substances?	Yes 80% No 20%



10. Do you carry out supplier on-site audits to check RoHS compliance?

Yes 47% No 53%

11. Do you know if your suppliers still produce non-compliant products?

Yes 28% No 62%

12. Have you met all the requirements of your clients regarding RoHS?

Yes 58% No 42%



13. Do you have emergency plans to deal with non-compliance?

Find new suppliers 65%
Process change 57%
Halt production 37%
Change components 59%
Abolish product 22%
Buy insurance 2%
⇒ No contingency plans 20%

14. Which methods do you use to control/check your own product?

Testing components 40%
Check BOM 50%
Supplier improvement plan 51%
Process improvement plant 40%
=> No control methods 13%



15. Do you control/check products from your subsidiaries?

Yes 85% No 15%

16. By when will you probably be able to meet the RoHS requirements?

2005 43%

By 30/3/2006 18%

By 30/6/2006 28%

Only after 1/7/2006 3%

17. What kind of help would you like to get from the government?

Consultancy support 72%

Certification service 59%

Training 69%

Fiscal or other incentives 50%

Loans 12%

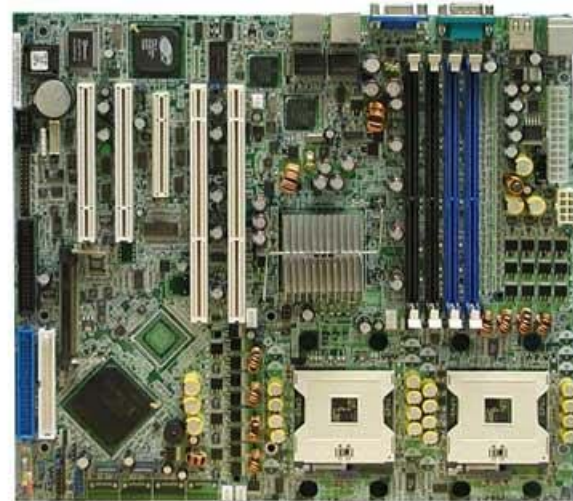


- April 2006 statements by Industrial Development Bureau (Ministry of Economic Affairs):
 - 146 major companies are not ready for RoHS;
 - this represents a total production value of \$800 million;
 - these figures under-estimate the real situation.

Case study: Company A



- A is Taiwan's leading EEE exporter to the EU
- Sold globally 52 million motherboards (or 1 in every 3 desktop PCs)
- Considered Taiwan's leading company on RoHS compliance
- Its compliance programme has been developed in close cooperation with Dell, its main client
- A has over 4000 suppliers





- Despite being Taiwan's biggest EEE exporter, A receives significant financial support from the government
- In 2005, "Green A" Steering Committee started to meet every 2 weeks
- C'tee is led by Chief Quality Officer, and made up of top managers
- It reports to the CEO



- Its compliance programme “Green A Plan” is now considered a model for all other EEE companies
- Cornerstone of “Green A” is an Internet-based management system “eGreen Platform”
- The eGreen Platform is part of a broader Supplier Relation Management Platform
- It consists of 7 key steps





- 1) Submit Vendor profile
- 2) Select part number(s)
- 3) Upload certificate(s)
- 4) Upload composition table or Material Safety Data Sheet
- 5) Other technical details (incl. heat resistance data)
- 6) Upload 3rd party test report(s)
- 7) Final confirmation





- Certificate requires supplier to declare substance presence in
 - parts;
 - packaging;
 - used during production process.
- Certificate must contain official company stamp/seal, and signature/stamp of responsible executive

Certificate of Non-use for The Controlled Substances/不使用禁用物質證明書
(For approval/承認用)

Date/日期: 2005 / 03 / 24

Vendor code/供應商編號: 12134

Company name/公司名稱: 奇力新電子股份有限公司

Responsible-person name/負責人姓名: Chester.chen

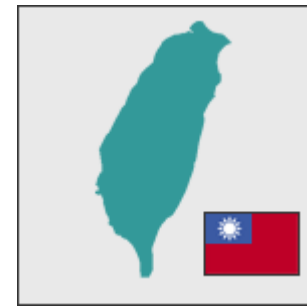
E-mail/電子郵件: chester.chen@chilisin.com.tw

(Responsible-person seal/負責人簽名或蓋章)

(Company Stamp/公司章)

We hereby declare this "Product" that all substances of combinations classified at level 1 (the management standard specified in S-AT2-001, issued by ASUS) are not used for the following materials and substances [1] the materials used for parts to be sold to your company; [2] Packaging materials; and [3] other substances used in manufacturing processes. Regarding the above-mentioned materials and substances, we notify that they are composed of the ingredients given at the composition table or MSDS.

我們公司在此宣告此「產品」之所有組成物質，在第1級管理物質之分類中(華碩 S-AT2-001 所訂定之管理標準)皆沒有使用到下列之材料和物質：包含(1)出售至貴公司零件的材質；(2)包裝材料；以及(3)在所有生產過程中



- Controlled substances list is much broader than RoHS 6:
 ⇒ asbestos, PVC, PCB, TBT, formaldehyde, etc
- Not clear if 3rd party test report is automatically required for every part or component
- Test report must not be older than 2 years
- Detailed info is required on all the circumstances of testing
- A has developed its own test “standard” or method

Upload 3rd party test report:

指定檔案上傳序號 / Assign to File No. [1] Assign Portion: no

指定日期 / Test Date: []

檔案位置 / File Location: [] 瀏覽...

檔案說明 / Description: []

Fill in Data: Restricted Material 3rd party test result
 禁用物質之相關測試方法及儀器,請參照 S-AT2-001 / Regarding to

For Component: (01-14大類):

Material	Test Item	Threshold	Result
Cd	Cd content in plastic part (including the body of component)	5	ppm
	Pb content in plastic part (including the body of component)	100	ppm
Pb	Pb content in electrode(or metal part)	1000	ppm
	Hg content in button cell battery	20000	ppm
Hg	Hg content in battery (excluding button cell battery)	5	ppm
	Hg content in small-sized fluorescent lamps(per lamp)	5	mg
	Hg content in straight-tube fluorescent lamps(per lamp)	5	mg
	Hg content in component (excluding battery and fluorescent lamps)	1000	ppm
Cr6+	Cr6+ content in component	100	ppm



- A states explicitly that one of its main drivers is “achieving market advantage and competitiveness”
- First Green models were shipped in July 2005
- Non-Green model phase-out by May 2006?

物質名稱及分類	
重金屬 (Heavy metals)	鎘以及鎘化合物 (Cadmium and cadmium compounds)
	鉛以及鉛化合物 (Lead and lead compounds)
	汞以及汞化合物 (Mercury and mercury compounds)
	鎳以及鎳化合物 (Nickel and nickel compounds)
	六價鉻化合物 (Hexavalent chromium compounds)
有機氯化物 (Chlorinated organic compounds)	多氯聯苯 (PCB) (Polychlorinated biphenyls)
	多氯化萘 (PCN) (Polychlorinated naphthalenes)
	聚氯三聯苯 (PCT)
	氯化烷烴 (CP) (Chlorinated paraffins)
	其他有機氯化物 (Other chlorinated organic compounds)
有機溴化合物 (Brominated organic compounds)	多溴聯苯 (PBB) (Polybrominated biphenyls)
	多溴聯苯醚 (PBDE) (Polybrominated diphenylethers)
	其他有機溴化合物 (Other brominated organic)
三丁基錫化合物、三苯基錫化合物 (Tributyl tin compounds, Triphenyl tin compounds) -屬有機錫化合物	
石棉 (Asbestos)	
特定偶氮化合物 (Specific Azo compounds)	
甲醛 (Formaldehyde)	
聚氯乙烯 (PVC) 以及聚氯乙烯混合物 (Polyvinyl chloride and PVC blends)	

Hidden angles



- Even company A only checks first tier suppliers
- 2nd tier, 3rd tier, etc are usually not actively involved
- Expectation that non-compliance will be discovered
- ROC government has set aside funds to help companies with negative impact of established non-compliance (incl. legal costs)