

Newsletter No.10 December 2006



Editorial

Another year has gone - and where is the time to reflect? We all thought July 1st and RoHS would be over and we would be looking for new challenges. And then came China RoHS! A whole new challenge, the biggest challenge being the time-frames. Four months from publication of the support standards to enforcements. Oh - and they need translating from Chinese to English as well.

The AeA translations of the 3 recently released support standards are now out in the public domain, as well as the release two weeks ago of a set of FAQs (in Chinese) relating to the 3 support standards. The 3 Standards are the Marking Requirements, the Concentration Limits and the Testing Methods. These are the 3 key Standards to support the main Directive, however there are still the General Disassembly Requirements, Environmentally Friendly Use Period Document, Packaging and Recycling Marks Standard and 3 sets of FAQs, not to mention the really helpful EU-China Trade Project report to make up the full picture. This totals over 300 pages. This is why we are working hard on the China RoHS Guidance Notes. Not many people in industry have the time to trawl through 300+ pages of legalese, to try and pick out the essential information needed to comply. With a bit of good luck we should have these posted on our website on the 23rd December. There will be a small charge for the download

The EU have round of exemptions out for public consultation, including the issue of

lead in solders. John Burke of PushBack USA has been successful in getting the EU to publicly consult on the issue of the ban of lead in solders on both environmental grounds and technical grounds (Tin Whiskers et al). So far he has 263 supporting submissions to his original submission. However, I would caution that if anything does happen as a result of this, I would expect it will take at least 2 years and involve the EC examining who has the remit to make what would be a fundamental change to RoHS. I will keep you all informed through this newsletter or by direct email if anything of major significance happens.

The UK have finally released their WEEE legislation. The regulations can be found at <http://www.dti.gov.uk/innovation/sustainability/weee/page30269.htm>

The RoHS Police in Belgium look like they plan to be busy in 2007. Belgium are one country that does not recognise the defence of due diligence. You are compliant or not - end of story, no grey areas. In Denmark disposable cameras have been withdrawn from the shelves on suspicion of non-compliance. Sweden is looking to ban Deca BDE locally seeing as RoHS has exempted it. Our lead article this month is on RoHS policing activities

Those of you who are exceptionally sharp eyed will have noticed that this newsletter has come from RoHS-International and not from RoHS and WEEE Specialists International. My company has undergone a re-branding exercise in recognition of our focus solely on RoHS. No other changes except website url to www.rohs-international.com. The new year will bring a RoHS Blog for the website to keep you all updated between newsletters. Those of you with links to the website may want to update the link. The old website url will remain active until June 2007.

To finish up, I hope you all have a very Merry Xmas and a prosperous New Year
 Roland Sommer - Editor

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RoHS 'police' are busy at work

RoHS enforcement agencies across Europe have been quietly inspecting electronics products for RoHS compliance since the July 1 deadline. For now, the EU RoHS authorities are focused on generating compliance not prosecution. But this may change in 2007.

[Drew Wilson](#)

[Green SupplyLine](#)

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RoHS enforcement agencies across Europe have been quietly inspecting electronics products for compliance to the European Union's Restriction of Hazardous Substances (RoHS) directive since the July 1 deadline went into effect. Violations have been found, but no officials interviewed knew of any fines being imposed anywhere in the EU yet. Officials are acting with restraint — at least this year.

In the U.K., the [National Weights and Measures Laboratory](#) has tested a range of electronic devices pulled from retail shelves. "We've found very little [product] that's complied at all," said Chris Smith, head of the NWML's RoHS team. (See related Q&A: [NWML talks about RoHS compliance.](#))

Substances detected include lead in rubber and cadmium in paint pigments and other RoHS substances in plastics, but no lead solder in circuit boards. "The industry seems to have sorted [the lead issue] out," Smith said.

There is an upside. Smith said nearly all products tested were 99% compliant. "Although finding fully-compliant product is difficult, finding products 99% of the way there is relatively easy," he said. "Rather than having big problems on our hands we have little snags."

Smith explained that some tested products may have been put on market before the deadline. NWML officials are initially doing

"state of the nation" testing on electronics to pinpoint high priority and low risk areas. "We want to find where to focus our attention in terms of enforcement," he said.

Industry whistleblowers

In Denmark, RoHS officials were tipped off by an investigative TV program looking into a possible RoHS violation involving disposable cameras. The cameras were withdrawn from the shelves of a retail store for further testing and the company was asked for documentation, said Torben Norlem, head of RoHS enforcement at [Denmark's Environmental Protection Agency](#) (København, Denmark).

Norlem said the case is worrying because allegations are that the Danish importer required compliance documents from the non-EU producer, but didn't really care if the documents were valid.

"If true, this indicates people are violating the legislation and are fully aware of that fact," Norlem said. "They basically don't care because they are in a market where price defines everything."

In Belgium, RoHS police have not yet been actively inspecting but they have a specific target in mind. "We are going after cheap products without a famous brand that are often the 'promotion of the week' in big retail shops," said Denis Pohl, coordinator of product policy in [Belgium's Ministry of the Environment](#).

Unknown, cheap product have a higher chance of non-compliance than brand name rivals because the low retail price suggests the producer's quality control system is not at a high level, Pohl added.

Pohl is also concerned that Asian manufacturers tend to view substance restrictions at the component level, not the homogenous material level. "There we can have a very big surprise."

RoHS police use a range of methods and sources in targeting specific products. Aside

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from random checks, authorities monitor the media for RoHS information and accept tips from whistleblowers, NGOs or citizens, said Smith. The NWML has a database with risk profiles of producers based on criteria such as product type, company size, market performance and whistleblower reports.

Whistleblowing can be tricky. To assess the tips, NWML uses a scoring system in the producer's risk profile. One complaint is noted, two complaints may raise the risk profile. "We don't take any one complaint on face value," Smith said. "We don't want to get into the game of slinging mud."

Whistleblowing seems to be picking up. "If one producer invested several millions to be RoHS compliant and sees another producer selling non-compliant RoHS products, this company will very often report to us," Norlem said. "We get these [reports] regularly."

In Belgium, companies are also tattling on rivals. Pohl said that although authorities listen, they remain wary of tips without substantiated information. "At the moment there is no serious information from competitors," he said.

Detection difficulties

Most RoHS police are using x-ray fluorescence (XRF) guns for on-the-spot inspections on the retail floor or for random checks when goods cross borders, sources said. But they acknowledge that XRF has accuracy limitations and can only be used for initial screening.

Getting substance-level details is not an easy task.

Zeina Al-Hajj in charge of the Toxics Campaign for [Greenpeace International](#) in Amsterdam, headed the Greenpeace project earlier this year that revealed RoHS substances inside major brand laptops. (See related article: [Greenpeace blasts Apple as laggard in green rankings.](#))

In fairness, this testing project was completed before the July 1 deadline as

exercise to try and understand what RoHS enforcement is up against. Greenpeace also found Deca-BDE in HP laptops, even though HP claimed to have phased it out years ago. HP responded to the Greenpeace report this month, conceding Deca-BDE was in the laptops, and replaced them with a newer generation product. (Click [here for HP's response.](#))

See related articles: [EU announces Deca-BDE exemption](#) and [Sweden moves to ban Deca-BDE in opposition to the EU law.](#)

"What we learned from testing can be summarized in a sentence: It is going to be extremely difficult to monitor RoHS compliance," Al-Hajj said.

RoHS substances tend to hide. For example, Greenpeace found that when the restricted flame retardants are embedded in plastic, they are virtually undetectable.

In Belgium, authorities staged a testing exercise on a piece of equipment that had 500 homogenous materials. "It was not possible to do it," Pohl said. "The challenge for enforcement authorities is to find the substances."

Detection exercises and challenges limited RoHS enforcement activities in 2006. RoHS inspectors were also restrained after July 1 while waiting for more clarity on the EU's definition of product "placed on the market," sources said. Moreover, authorities wanted to give time for old products to flush out of the market.

Next year, RoHS violations may make more noise. Screening in the U.K. continues until enough data is collected on high risk products, which will then be targeted. Belgium and Denmark plan to step up enforcement efforts with major campaigns. Greenpeace expects to do further testing of unspecified products in 2007, Al-Hajj said, targeting big companies with large market shares who wield influence over suppliers.

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In 2007, enforcement will get stronger," Pohl added.

But the imposition of penalties, at least right now, seems to be reserved for only the most blatant violators. Authorities appear to be on a more collaborative track. The U.K., arguably the lead RoHS authority in Europe, will avoid the heavy-handed approach.

"Our job at the moment is generating compliance, not prosecuting," Smith said. "If we find a problem and can go to the company to discuss it and put an improvement plan in place, that's generating compliance."

Belgium is different in that it does not accept the "due diligence" defense. The producer has sole responsibility for compliance and also bears full responsibility for the accuracy of supplier certificates that claim compliance, Pohl said.

Moreover, authorities do not accept 99.9% compliant product. "Either it is compliant or is not," he said.

Pohl added, however, that if Belgium's RoHS police find violations, they prefer to work with industry organizations rather than taking direct action against an individual producer. "If we go to associations, we can give more importance to our inspections and increase awareness for all players in the market," he said.

Sixth Stakeholder consultation

By Roland Sommer

The sixth stakeholder consultation is open until the 10th January for support submissions. This is your chance to have your say. See http://ec.europa.eu/environment/waste/rohs_6_consult.htm for more details.

The submissions in this consultation are:

1. Lead used for shielding of x-radiation emissions for CRT;
2. Lead as soldering alloy in high performance communication electronic board and hexavalent chromium (Cr-VI);
3. GemCore 410 EMV;
4. SAVBIT solder;
5. Sn-Pb soldering used in Ground-based Aeronautical Communication Equipment Manufacturing;
6. Transducers used in professional loudspeaker systems, using tin-lead solder;
7. Tin-lead solder in the manufacture of professional audio equipment;
8. Inventory of special ICS having tin-lead solder on/in leads/balls, used in specialist/professional equipment;
9. Crystal Stones within the battery operated watch;
10. EEE used for the broadcast and homeland security sector;
11. AM186ES-V40 containing lead in used in the leads over plating and AM79C961AKC containing lead in used in the leads over plating;
12. Cadmium sulphide or cadmium selenide in polymer based thin film transistor;
13. Lead used in the soldering for surface finishing at the electric pole terminal on the electronic parts;
14. Cadmium contained in the cadmium oxide of a thick film ceramic substrate;
15. All electronics assemblies using lead in solder;
16. Lead in electric overblankets for Hot Spot detection;
17. MPC10 used in automatic vending machines to achieve the payment by card;
18. Hexavalent Chrome Cr-VI when used as a passivate;
19. Lead contained in circuit boards, obsolete and non-compliant Intel 80c188/86 EA\XL microprocessors, Analog Devices ADMC300 DSP, and NEC uPD7101 DART and hexavalent chromium;

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20. Component used in the manufacture of electric blankets and heating pads.
21. Request to delete exemption for "Lead as impurity in RIG (rare earth iron garnet) Faraday rotators used for fibre optic communications systems."
22. Lead in Trimmer Potentiometer elements.
23. Cadmium in opto-electronic components.

iNEMI updates tin whisker guidelines

By Gina Roos

[Green SupplyLine](#)
(12/18/2006)

Herndon, Va. — The International Electronics Manufacturing Initiative ([iNEMI](#)) Tin Whisker User Group has released a major update of its publication, "Recommendations on Lead-Free Finishes for Components Used in High-Reliability Products." This latest revision includes significant changes to previous recommendations to reduce the risk of tin whiskers as well as new additions.

One key finding of the iNEMI Tin Whisker User Group (Agilent, Alcatel-Lucent, Celestica, Cisco Systems, Delphi Electronics & Safety, Hewlett-Packard, IBM, Sun Microsystems and Tyco Electronics) is that pure tin electroplating presents a risk in high-reliability applications. The guidelines developed by this group of companies are intended to minimize the risk of failures from tin whiskers, and includes recommendations for component finishes for a variety of applications.

"The industry has made significant progress in standardizing its approach to tin whisker mitigation and testing," said Joe Smetana, principal engineer, advanced technology for

Alcatel-Lucent, and chair of the iNEMI Tin Whisker User Group, in a statement.

"Three standards were released in 2005 and 2006 addressing tin whisker testing, environmental acceptance requirements and mitigation practices. The User Group strongly endorses the use of these documents as part of a comprehensive strategy of mitigation practices, tin whisker testing, and plating process controls, all of which are necessary to reduce the risk of failures associated with tin whiskers. However, the tin whisker issue is not solved," Smetana stated.

The three standards include: JEDEC standards JESD22A121.01, Measuring Whisker Growth on Tin and Tin Alloy Surface Finishes; JESD201, Environmental Acceptance Requirements For Tin Whisker Susceptibility of Tin and Tin Alloy Surface Finishes; and JEDEC/IPC joint publication JP002, Current Tin Whiskers Theory and Mitigation Practices Guideline.

New recommendations center on issues such as corrosion, mechanical stress, use of tin over brass or tin over steel, thermal-cycled end use environments, and non-columnar grain structure. It also includes recommendations regarding the use of bright tin. iNEMI said while bright tin is generally not recommended, the group indicates that there are some applications where it may be viable, particularly with some of the new bright tin platings, and outlines specific mitigation and testing practices for its use.

Changes to iNEMI's previous recommendations include:

- Changed its stance on annealing of matte tin over copper (It can be accepted when accompanied by supporting test data.)
- Updated its position on bias (Recent data indicates electrical bias is no longer considered a significant concern and does not require additional testing.)
- Changed information about Alloy 42

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(The group warns users to be cautious in using tin finishes on alloy 42 (Fe-42Ni) lead-frames in applications where there is significant thermal cycling, and noting possible mitigation practices.)

- Clarifies statements about the use of tin-bismuth finishes
-

The document is also more user-friendly by segmenting the revised guidelines for migrating to RoHS-compliant finishes into several topic areas. These sections include commonly available mitigation practices, other (less commonly available) practices, finishes that should generally be avoided, mitigation practices that require further study, applications of concern, and other considerations and recommendations.


A word of thanks to our Sponsors


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Upcoming Events

November 21st Christchurch, New Zealand. ESConnectivity - RoHS Update, Christchurch Convention Centre

February 23rd Christchurch, New Zealand. "RoHS Basics". SME Seminar and discussion group, 1 ½ hrs; Location TBA

February 26th Christchurch, New Zealand. EU RoHS "The Full Picture", Commadore Copthorne Hotel, Memorial Ave - one day training course.

February 27th Christchurch, New Zealand. China RoHS and the rest of the world. Commadore Copthorne Hotel, Memorial Ave. China RoHS plus overview of USA RoHS, Japan, South Korea. ½ day training course.

March 2nd Christchurch, New Zealand. EuP and Design for Environment Principles. Commadore Copthorne Hotel, Memorial Ave. ½ day training course.

March 5th Sydney, Australia. EU RoHS "The Full Picture", one day training course

March 6th am Sydney, Australia. China RoHS and the rest of the world. ½ day training course.

March 6th pm Sydney, Australia. EuP and Design for Environment Principles. ½ day training course.

March 30th Christchurch, New Zealand. "Homogeneous materials". SME Seminar and discussion group, 1 ½ hrs; Location TBA.

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