Regulatory Requirements for Environmental Compliance

“What is happening in the world of environmental compliance in the EU?”

PSES San Diego Chapter - April 14, 2015
Today’s Agenda

- Overview of Major Changes to the RoHS Directive (RoHS2) and RoHS 2 timelines
- Proving RoHS Compliance/Enforcement
- WEEE Analysis
- Articles under the REACH Legislation
- Packaging Directive
- Battery Directive
- TUV Rheinland Services
TUV Rheinland Services

Common EU services:
➢ Verifying compliance to RoHS2 via testing and data collection
➢ Screening or testing for REACH SVHC’s/Restriction List
➢ WEEE Recycling/Recovery rates calculated and WEEE registration
➢ Battery and Packaging registration/testing

Why?:
➢ To satisfy bid requests
➢ For compliance to mandatory EU Directives and Regulations
➢ To help companies remove the responsibility from importers/distributors and create an open market
## Annex I Categories of EEE covered by RoHS

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Large household appliances</td>
<td>SAME</td>
</tr>
<tr>
<td>2. Small household appliances</td>
<td>SAME</td>
</tr>
<tr>
<td>3. IT &amp; telecommunications equipment</td>
<td>SAME</td>
</tr>
<tr>
<td>4. Consumer equipment</td>
<td>SAME</td>
</tr>
<tr>
<td>5. Lighting equipment</td>
<td>SAME</td>
</tr>
<tr>
<td>6. Electrical and electronic tools (exception: large-scale industrial tools)</td>
<td>SAME</td>
</tr>
<tr>
<td>7. Toys, leisure and sports equipment</td>
<td>SAME</td>
</tr>
<tr>
<td>8. Medical devices</td>
<td>Now Added</td>
</tr>
<tr>
<td>9. Monitoring and control instruments</td>
<td>Now Added</td>
</tr>
<tr>
<td>10. Automatic dispensers</td>
<td>NEW</td>
</tr>
</tbody>
</table>

**Note:**

- **Was Exempt:**
  - Medical devices
  - Monitoring and control instruments

- **Now Added:**
  - Toys, leisure and sports equipment
  - Medical devices
  - Monitoring and control instruments

**11. Other electrical and electronic equipment not covered by any of the categories above**

---

[Image: TÜV Rheinland of NA S.Sagamang]
RoHS 2 Timeline

- **NOV/2010**
  Agreement of RoHS Recast

- **JULY/2011**
  2011/65/EU
  Posted in Official Journal

- **JAN/2013**
  TCF
  Tech File Requirement

- **JULY/2014**
  Medical and M&C Devices Mandatory

- **JULY/2017**
  Industrial M&C Mandatory

- **JULY/2016**
  IVD Devices Mandatory

Additional Restricted Substances added to list?
- (HBCDD), (DEHP), (BBP)
- (DBP) & others likely

July 2019 for Category 11 (Open Scope)
Testing and collecting now to be pro-active for the upcoming future requirement
RoHS 2 Summary of changes

1. Category 8 equipment is included
   • Effective July 22, 2014 for “Medical Devices”
   • Effective July 22, 2016 for “In vitro medical devices”
2. New Annex I (Categories are now listed here instead of referring to WEEE Directive)
3. Category 9 equipment is included
   • Effective July 22, 2014 for “Monitoring and control instruments”
   • Effective July 22, 2017 for “Industrial monitoring and control instruments”
4. New “open scope” to include all electrical and electronic equipment” after July 22, 2019
5. Cables and spare parts for its repair, its reuse, updating of its functionalities or upgrading of its capacity, does not contain the substances listed in Annex II (See Article 4)
6. Current exemptions are now located in Annex III. Annex IV contains new exemptions that apply specifically to medical devices and monitoring and control devices. Expiry Dates!
7. Manufacturers must now demonstrate compliance per Decision 768/2008/EC Module A (technical docs, etc.)
8. CE Marking – RoHS now falls under CE Marking requirement
9. EU DOC must be in the language of the local market (See Article 13)
10. EN 50581 is now listed in the OJ as a harmonized standard

If you are CE marking your products and your product is in scope, it is understood that your product is fully RoHS compliant.
RoHS 2 EN 50581
This Directive does not apply to:

Military Equipment -

‘equipment which is necessary for the protection of the essential interests of the security of Member States, including arms, munitions and war material intended for specifically military purposes’;

Equipment designed to be sent into Space –

Self-explanatory
This Directive does not apply to:

Part of another type of equipment outside the scope-

“equipment which is specifically designed, and is to be installed, as part of another type of equipment that is excluded or does not fall within the scope of this Directive, which can fulfill its function only if it is part of that equipment, and which can be replaced only by the same specifically designed equipment;”

A good example of this could be a PC and Keyboard that is integrated into a machine that falls outside the scope of the directives. Integrated means that it is a custom built PC and keyboard not confused with off-the-shelf PCs and keyboards.
This Directive does not apply to:

Equipment used only for research and development –

“equipment specifically designed solely for the purposes of research and development only made available on a business-to-business basis.”

Large-scale stationary industrial tools –

“‘large-scale stationary industrial tools’ means a large-scale assembly of machines, equipment, and/or components, functioning together for a specific application, permanently installed and de-installed by professionals at a given place, and used and maintained by professionals in an industrial manufacturing facility or research and development facility”
This Directive does not apply to:

Large-scale fixed installations -

“large-scale fixed installation’ means a large-scale combination of several types of apparatus and, where applicable, other devices, which are assembled and installed by professionals, intended to be used permanently in a pre-defined and dedicated location, and de-installed by professionals”

Please remember that if a product exemption applies to one application, it may not apply to other applications. Meaning your product may still require RoHS compliance.
Comment on Military exclusion:

Military equipment is defined by the RoHS Directive as exempt.

Please note that it is possible for the MOD to request documentation on environmental compliance pertaining to EU Legislation or civil legislation.

Some examples of what may be requested:
  - EU RoHS
  - REACH
  - WEEE
  - ChemG
  - Etc…

Hazardous substances that may be present at all stages of the lifecycle of the product. (Manufacturing, Normal use, End-of-life)
Proving compliance/Enforcement Points

- **Technical file is a required**
  - Failure to provide an EU technical file upon request by a national authority is a compliance violation *(RoHS due-diligence- (test reports-low risk, CoC’s higher risk))*

- **If the manufacturer, importer, or distributor believes a product is not in compliance they are required to:**
  - Not place the product on the market until it is compliant
  - Make corrections to product, withdraw, or recall it from the market
  - Inform national authorities
  - Keep a record of non-compliant products

- **National authorities who believe that the non-conformance is not restricted to their country, they must inform the commission and other member states**

- **CE marking and DOC**
### Proving compliance/Enforcement Points

![RAPEX - Search notifications](image)

<table>
<thead>
<tr>
<th>Risk level</th>
<th>Product user</th>
<th>Year - Week</th>
<th>No. Ref.</th>
<th>Notifying country</th>
<th>Product</th>
<th>Category</th>
<th>Risk</th>
<th>Measures adopted by notifying country</th>
<th>Products were found and measures were taken also in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious</td>
<td>Consumer</td>
<td>2015-2</td>
<td>16</td>
<td>Slovenia</td>
<td>BLENDER</td>
<td>Electrical appliances and equipment</td>
<td>Environment</td>
<td>Certain solder on PCB and on motor contain lead (measured value up to 0.02%). The product does not comply with the Directive 2011/65/EC (Annex II) on the restriction of the use of certain hazardous substances in electric and electronic equipment.</td>
<td></td>
</tr>
</tbody>
</table>

---

4-15-15 TÜV Rheinland of NA S.Sagamang
8.2 Various powers of enforcement are available, including:
- Making test purchases;
- Exercising powers of entry to business premises (this excludes premises that are used wholly or mainly as a private dwelling);
- Obtaining warrants;
- Requiring the production of compliance documentation and other information which may provide evidence as to whether or not the Regulations have been complied with in a particular case or class of cases;
- Inspecting processes, documents, goods, EEE etc;
- Seizing and detaining EEE, documents, information etc and performing analytical tests, or retaining it for use as evidence in proceedings;
- Issuing a compliance or enforcement notice requiring certain action to be taken, or requiring non-compliant goods to be withdrawn from the market or prohibiting or restricting the placing of non-compliant goods on the market;
- Issuing a recall notice requiring the economic operator to use reasonable endeavours to organise the return of the EEE;
- The market surveillance authority can take an action that could have been required under a compliance, enforcement or recall notice in certain circumstances.
The restrictions take effect beginning on July 22, 2019 for all EEE except category 8 (medical devices) and category 9 (monitoring and control instruments) which will have an additional 2 years to transition and need to comply by July 22, 2021. This provides most EEE manufacturers and the global supply chain with four and a half years to prepare. In order to avoid double regulation, the restriction through entry 51 of Annex XVII to that Regulation shall therefore continue to be the only restriction applicable to DEHP, BBP and DBP in toys.

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS No</th>
<th>Maximum concentration value in homogeneous material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bis(2-ethylhexyl) phthalate (DEHP)</td>
<td>117-81-7</td>
<td>0.10%</td>
</tr>
<tr>
<td>Benzyl butyl phthalate (BBP)</td>
<td>85-68-7</td>
<td>0.10%</td>
</tr>
<tr>
<td>Dibutyl phthalate (DBP)</td>
<td>84-74-2</td>
<td>0.10%</td>
</tr>
<tr>
<td>Diisobutyl phthalate (DIBP)</td>
<td>84-69-5</td>
<td>0.10%</td>
</tr>
</tbody>
</table>

The maximum concentration value for the phthalates will be 0.1% w/w in homogeneous material.
On April 9, 2015, exemption 7b proposal has been withdrawn. Decisions on the above expected in 4th quarter of this year. Time also required to get published in OJ. To follow visit: http://ec.europa.eu/environment/waste/rohs_eee/pdf/renewal_exemptions_oct14-jan15.pdf
Another point to ponder if related to your products...

Issued 3-12-2015

Study for the analysis of impacts from RoHS2 on non-road mobile machinery without an on-board power source, on windows and doors with electric functions, and on the refurbishment of medical devices.


What is this about?

Oeko-Institut, supported by Eunomia, has been appointed by the European Commission2, to provide an analysis of possible economic, social and environmental impacts related to the above mentioned areas of review. This analysis is to regard three main areas:

- Non-road mobile machinery without an on-board power source;
- Windows and doors with electric functions; and
- Refurbishment practices, where spare parts are recovered from EEE not compliant with RoHS, refurbished and reused for the repair of EEE devices to be made available on the EU market.
What is WEEE?

• The aim of the Waste Electrical and Electronic Equipment Directive is to limit the amount of WEEE in landfills.

• As of August 13 2005 ‘Producers’ need to finance the collection and recycling of WEEE.

• This Directive applies to companies in all stages of the creation and recycling of WEEE.

• Because it is an environmental directive there will be differences in implementation across the member states.

Primarily - Financing of the collection and recycling of WEEE. TUVRINA offers service for the registration requirement as well as on-going reporting services.
WEEE Directive Cont.

WEEE Marking

Marking the product according to **EN 50419**

Marking must include:

- A unique identification of producer (e.g. brand name, trade mark or other means)

- Date or year of manufacture/placed on the market in coded or un-coded text or

- Marking as above with the crossed-out wheeled bin and **additional bar**
Annex V Minimum Recycling / Recovery Targets

- **3. IT & telecommunications equipment**: 65% / 75% (70% / 80%)
- **4. Consumer equipment and PV panels**: 50% / 70% (55% / 75%)
- **2. Small household appliances**: 75% / 80% (80% / 85%)
- **5. Lighting equipment**:
- **6. Electrical and electronic tools**:
- **7. Toys, leisure and sports equipment**:
- **8. Medical devices**:
- **9. Monitoring and control instruments**:
- **1. Large household appliances**
- **10. Automatic dispensers**

**Dates:**
- **13 AUG 2012**
- **15 AUG 2015**
Annex V Minimum Recycling / Recovery Targets

- **80% / 85%**
  1. Temperature exchange equipment

- **70% / 80%**
  2. Screens, monitors, & equipment containing screens having a surface >100cm²
  3. Lamps
  4. Large equipment (external dimensions >50cm)

- **55% / 75%**
  5. Small equipment (external dimensions ≤50cm)
  6. Small IT and telecommunication equipment (external dimensions ≤50cm)

- **80%**
  3. Lamps

**15 AUG 2018**
Open-Scope Period (After 14 August 2018)

Until 15 August 2018 all 10 categories from Annex I will remain in effect.

All EEE must be classified under one of the new 6 categories instead of the existing 10 categories.

- EEE is out of scope only if it falls under 1 of the 10 exclusions mentioned in Article 2.

New recovery targets are assigned to each of the new categories. Targets may change from transitional period to open-scope period for each product due to type and size.
WEEE Recast timeline

JAN/2012
• Agreement of WEEE recast

JULY/2012
• 2012/19/EU Posted in Official Journal

AUG/2012
• Scope Part 1:
  • Same as Directive 2002/96/EC

FEB/2014
• Deadline for member states to enact 2012/19/EU

AUG/2015
• Part 2
  • Recovery Targets Change

AUG/2018
• Scope: Part 3
  • Final Recovery Targets for all WEEE
Changes to Separate Collection

- Distributors must set aside an area for collection of small EEE, ≤25cm external dimensions, at no charge to the end-user in a retail store with dimensions ≥400 m².

- The new directive obliges retailers to accept a discarded item when a new equivalent item is purchased.
Registration

- Producers or on behalf of their authorized representative supplying EEE by means of distance communication shall be registered in the Member State that they sell to.

- When registering, each producer, or each authorized representative, provides the information set out in Annex X, Part A, undertaking to update it as appropriate and information set out in Annex X, Part B.

- Member States may, where appropriate, encourage producers to finance also the costs occurring for collection of WEEE from private households to collection facilities.

- TUV Rheinland has service offerings for this process
TUV services – What services will be performed?

WEEE Services

1. Each product model will be disassembled.
2. Individual components will be photographed and weighed
3. Each component/material will be categorized as Re-use, Recyclable, Incineration, or Waste
4. Like components/materials will be grouped
5. Percentages of components/materials will be calculated to represent the whole
6. A 3R report will be created to document the percentages.
7. The model will also be evaluated according to the marking and labeling requirements as established by the WEEE Directive. A WEEE Design report will be provided as the deliverable
8. Registration services for all member states
ARTICLES under REACH

The SVHC list is currently up to 161 SVHC’s
REACH – What is an article?

- Article means an object which during production is given a special shape, surface or design which determines its function to a greater degree than its chemical composition (REACH Article 3(3))

- An article is composed of one or more substances or preparations.
- Specific substances may be added to give the article special properties

- Examples: furniture, clothes, vehicles, toys
- Limited exemptions: Medicine, food, cosmetics
### REACH – basic definition

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>substance</strong></td>
<td>a chemical element and its compound in the natural state or obtained by any manufacturing process, including any additive necessary to preserve its stability and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.</td>
</tr>
<tr>
<td><strong>preparation</strong></td>
<td>a mixture or solution composed of two or more substances</td>
</tr>
<tr>
<td><strong>article</strong></td>
<td>an object which during production is given a special shape, surface or design which determines its function to a greater degree than does its chemical composition</td>
</tr>
</tbody>
</table>

**Only the substances have to be registered, not the preparations!!**
Substances of Very High Concern are

- PBT (persistent, bio accumulative and toxic) substances
- vPvB (very persistent and very bio accumulative) substances
- CMR (carcinogenic, mutagenic or toxic for reproduction)
- Substances of equivalent concern with scientific evidence of probable serious effects

SVHC’s are typically added in mid June and mid December of each year. Companies have 6 months to verify SVHC concentration from the time the additional substances are added.
Articles 7.2 and 7.3: Identified Substances of Very High Concern in articles shall be notified when:

The substance is present in the articles in total over 1 tonne per producer/importer per year

and

The substance is present in those articles in a concentration above 0.1% (w/w).

*Notification is only required when both of the above conditions are valid.

If the producer/importer can exclude exposure of humans or environment he does not need to notify, but shall supply appropriate instructions to the recipients of the article. TUVRNA can assist with this process.
REACH Article 33 – When you need to inform downstream?

**Duty to communicate information on substances in articles**

1. Any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (w/w) shall provide the recipient of the article with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance. TUVRNAS can assist with this process. ECHA Article Guidance document elaborates.

2. On request by a consumer any supplier of an article containing a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) in a concentration above 0,1 % weight by weight (w/w) shall provide the consumer with sufficient information, available to the supplier, to allow safe use of the article including, as a minimum, the name of that substance. The relevant information shall be provided, free of charge, within 45 days of receipt of the request. REACH non-conformity also listed in RAPEX.
REACH SVHC Roadmap to 2020

Figure 1: SVHC Screening in wider context: Inter-linkages between the REACH and CLP processes.
REACH Restriction list Annex XVII

Don’t forget about Annex XVII – based on application or particular substance, this may impact your products

PAH restriction to be added on Dec. 27, 2015:

ANNEX

In Annex XVII to Regulation (EC) No 1907/2006, in Column 2 of entry 50, the following paragraphs 5, 6, 7 and 8 are added:

5. Articles shall not be placed on the market for supply to the general public, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 1 mg/kg (0.0001 % by weight of this component) of any of the listed PAHs. Such articles include amongst others:
   — sport equipment such as bicycles, golf clubs, racquets
   — household utensils, trolleys, walking frames
   — tools for domestic use
   — clothing, footwear, gloves and sportswear
   — watch-straps, wrist-bands, masks, head-bands

6. Toys, including activity toys, and childcare articles, shall not be placed on the market, if any of their rubber or plastic components that come into direct as well as prolonged or short-term repetitive contact with the human skin or the oral cavity, under normal or reasonably foreseeable conditions of use, contain more than 0.5 mg/kg (0.00005 % by weight of this component) of any of the listed PAHs.

7. By way of derogation from paragraphs 5 and 6, these paragraphs shall not apply to articles placed on the market for the first time before 27 December 2015.

8. By 27 December 2017, the Commission shall review the limit values in paragraphs 5 and 6 in the light of new scientific information, including migration of PAHs from the articles referred to therein, and information on alternative raw materials and, if appropriate, modify these paragraphs accordingly.'
c) Interim conclusion

123. Consequently, the supplier of an entire article consisting of component articles which, despite being integrated into an entire article, retain a shape, surface or design of their own is required to provide information to recipients and, on request, consumers under Article 33 of the REACH Regulation on a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) if it is present in a component article above a concentration of 0.1% weight by weight (w/w) and relevant information is available to the supplier.

V – Conclusion

124. I therefore propose that the Court answer the request for a preliminary ruling as follows:

(1) If the other conditions laid down in Article 7(2) of the REACH Regulation are satisfied,

(a) the producer of an entire article consisting of component articles which, despite being integrated into an entire article, retain a shape, surface or design of their own, but were made or assembled by other producers, is required to notify ECHA if a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) is present in the entire article above a concentration of 0.1% weight by weight (w/w); and

(b) the importer of an entire article consisting of component articles which, despite being integrated into an entire article, retain a shape, surface or design of their own is required to notify ECHA if a substance meeting the criteria laid down in Article 57 and identified in accordance with Article 59(1) is present in a component article above a concentration of 0.1% weight by weight (w/w).

(2) The supplier of an entire article consisting of component articles which, despite being integrated into an entire article, retain a shape, surface or design of their own is required to provide information to recipients and, on request, consumers under Article 33 of the REACH Regulation on a substance meeting the criteria in Article 57 and identified in accordance with Article 59(1) if it is present in a component article above a concentration of 0.1% weight by weight (w/w) and relevant information is available to the supplier.
Objective according 94/62/EC:

1. This Directive aims to harmonize national measures concerning the management of packaging and packaging waste in order, on the one hand, to prevent any impact thereof on the environment of all Member States as well as of third countries or to reduce such impact, thus providing a high level of environmental protection, and, on the other hand, to ensure the functioning of the internal market and to avoid obstacles to trade and distortion and restriction of competition within the Community.

2. To this end this Directive lays down measures aimed, as a first priority, at preventing the production of packaging waste and, as additional fundamental principles, at reusing packaging, at recycling and other forms of recovering packaging waste and, hence, at reducing the final disposal of such waste.
Scope according 94/62/EC:

1. This Directive covers all packaging placed on the market in the Community and all packaging waste, whether it is used or released at industrial, commercial, office, shop, service, household or any other level, regardless of the material used.

2. This Directive shall apply without prejudice to existing quality requirements for packaging such as those regarding safety, the protection of health and the hygiene of the packed products or to existing transport requirements or to the provisions of Council Directive 91/689/EEC of 12 December 1991 on hazardous waste (2).
Packaging Directive

Definition according 94/62/EC:

'Packaging' consists only of:
(a) sales packaging or primary packaging, i.e. packaging conceived so as to constitute a sales unit to the final user or consumer at the point of purchase;

(b) grouped packaging or secondary packaging, i.e. packaging conceived so as to constitute at the point of purchase a grouping of a certain number of sales units whether the latter is sold as such to the final user or consumer or whether it serves only as a means to replenish the shelves at the point of sale; it can be removed from the product without affecting its characteristics;

(c) transport packaging or tertiary packaging, i.e. packaging conceived so as to facilitate handling and transport of a number of sales units or grouped packagings in order to prevent physical handling and transport damage. Transport packaging does not include road, rail, ship and air containers;
What do you have to do?

1. Properly mark your packaging with a recognized identification and classification method
2. Determine the amount of packaging material placed on the market
3. Determine the concentration of heavy metals in your packaging:
   • Lead
   • Cadmium
   • Mercury
   • Hexavalent Chromium
4. Determine if registration is required under national packaging requirements

**Sum of the substances listed above must not exceed 100 ppm by weight per packaging component**

**Note- This is the same requirement for Toxics in Packaging here in the USA**
Battery Directive

Objective according to 2006/66/EC

(1) rules regarding the placing on the market of batteries and accumulators and, in particular, a prohibition on the placing on the market of batteries and accumulators containing hazardous substances; and

(2) specific rules for the collection, treatment, recycling and disposal of waste batteries and accumulators to supplement relevant Community legislation on waste and to promote a high level of collection and recycling of waste batteries and accumulators.
Scope according to 2006/66/EC

1. This Directive shall apply to all types of batteries and accumulators, regardless of their shape, volume, weight, material composition or use. It shall apply without prejudice to Directives 2000/53/EC (ELV) and 2002/96/EC (WEEE).

2. This Directive shall not apply to batteries and accumulators used in:

(a) equipment connected with the protection of Member States' essential security interests, arms, munitions and war material, with the exclusion of products that are not intended for specifically military purposes;
(b) equipment designed to be sent into space.
Definitions according to 2006/66/EC

(1) ‘battery’ or ‘accumulator’ means any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (non-rechargeable) or consisting of one or more secondary battery cells (rechargeable);
(2) ‘battery pack’ means any set of batteries or accumulators that are connected together and/or encapsulated within an outer casing so as to form a complete unit that the end-user is not intended to split up or open;
(3) ‘portable battery or accumulator’ means any battery, button cell, battery pack or accumulator that:
   (a) is sealed; and
   (b) can be hand-carried; and
   (c) is neither an industrial battery or accumulator nor an automotive battery or accumulator;
(4) ‘button cell’ means any small round portable battery or accumulator whose diameter is greater than its height and which is used for special purposes such as hearing aids, watches, small portable equipment and back-up power;
(5) ‘automotive battery or accumulator’ means any battery or accumulator used for automotive starter, lighting or ignition power;
(6) ‘industrial battery or accumulator’ means any battery or accumulator designed for exclusively industrial or professional uses or used in any type of electric vehicle;
(7) ‘waste battery or accumulator’ means any battery or accumulator which is waste within the meaning of Article 1(1)(a) of Directive 2006/12/EC;
Prohibitions according to 2006/66/EC

1. Without prejudice to Directive 2000/53/EC, Member States shall prohibit the placing on the market of:
(a) all batteries or accumulators, whether or not incorporated into appliances, that contain more than 0.0005 % of mercury by weight; and
(b) portable batteries or accumulators, including those incorporated into appliances, that contain more than 0.002 % of cadmium by weight.

2. The prohibition set out in paragraph 1(a) shall not apply to button cells with a mercury content of no more than 2 % by weight until 1 October 2015.

3. The prohibition set out in paragraph 1(b) shall not apply to portable batteries and accumulators intended for use in:
(a) emergency and alarm systems, including emergency lighting;
(b) medical equipment; or
(c) cordless power tools; this exemption in respect of cordless power tools shall apply until 31 December 2016.

4. As regards button cells for hearing aids, the Commission shall maintain under review the exemption referred to in paragraph 2 and report to the European Parliament and the Council on the availability of button cells for hearing aids which are in compliance with paragraph 1(a) no later than 1 October 2014. Where justified due to the lack of availability of button cells for hearing aids which are in compliance with paragraph 1(a), the Commission shall accompany its report by an appropriate proposal with a view to extending the exemption referred to in paragraph 2 with regard to button cells for hearing aids. To expire in Oct. 2015
Battery Directive

What do you have to do?

1. Verify mercury and cadmium concentrations
2. Verify marking and labeling requirements per the Directive
3. Determine if registration is required
OUR SERVICES

RECYCLING
- Zero Landfill
- Data/Brand Security
- Global Tracking
- Asset Recovery
- OEM Take-Back

COMPLIANCE PLATFORM
- Compliance-Software
- Reports
- Supplier Interface
- BOM Management
- More!

DATA COLLECTION
- BOM Scrubbing
- BOM Analysis
- Collection of:
  - RoHS / REACH
  - SVHCs / CPSC
  - JIGA/B, Global
  - Custom

TRAINING & CERTIFICATION
- RoHS / WEEE
- REACH
- TOYS
- Eco Design
- Others

ECO DESIGN
- ErP Directive
- ENERGY STAR®
- IEEE 1680 (EPEAT)
- LCA
- CO2, LCI, GHG, EPD
- SEEBALANCE®

TESTING
- Chemical
- Destructive
- Nondestructive
- Mechanical
- Electrical

TÜVRheinland
Precisely Right.
www.tuv.com/us/green-solutions
OUR SERVICES

**TESTING**

Chemical | Destructive | Nondestructive | Mechanical

**Nondestructive Testing:**
- X-Ray fluorescence spectrometry
- Pre-screening for RoHS, CPSC, others
- Recycling manuals

**Chemical Analysis:**
- Identification & quantification of substances in materials
- GC/MS, ICP/AES, VOC, others
- Toys, electronics, textiles, consumer products, children's articles, packaging, others

**DATA COLLECTION**

BOM Scrubbing | BOM Analysis | Collection of: RoHS, REACH, SVHCs, CPSC, JIGA/B, Global Custom

**Provides BOM Analysis for Clients:**
- Duplicate parts
- End-of-Life parts
- Amount of data that can be collected
- Status of suppliers

**Data Collection Services to Feed our Compliance Platform:**
- Full Material Compliance
- RoHS, CPSC, CA Prop 65, REACH SVHCs, others
- Recycled content and mass of part number etc

www.tuv.com/us/green-solutions
OUR SERVICES

Services include:

- Total Lead/Consumer Protection Safety Improvement Act (CPSIA)
- Heavy Metals
- Nickel Release
- Phthalates
- RoHS
- Packaging Waste
- Flame Retardant Content
- Bisphenol A
- VOC Emissions
- California Propositions 65

- REACH Regulation Compliance and Evaluation Services for Chemical Preparations
- Product Compliance Services for US CPSIA and Canada’s HPA
- Compliance with EU REACH Regulations
- Chemical Regulations for Different Types of Products
- Compliance with EU Chemical Regulations
- Product Development Support
- Documentation and Evaluation of the Results in Comprehensive Report
THANK YOU

Q & A

Business Development Manager
Environmental Services

Scott Sagamang
TUV Rheinland of North America, Inc
2709 SE Otis Corley Drive
Bentonville, AR 72712
Fax: (479) 254-0821
Cell: (517) 303-0281
ssagamang@us.tuv.com