



WORLDWIDE ENVIRONMENTAL LEGISLATIONS UPDATE

Workgroup meeting, 30.05.17

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Content

1. EU RoHS-2
2. RoHS Worldwide
3. EU WEEE
4. WEEE Worldwide
5. EU REACH
6. US Conflict Minerals
7. California Prop-65
8. Batteries
9. Various

EU RoHS

Directive (EU) 2017/2102: RoHS-2 “Open Scope” Amendment

- ❑ RoHS 2 Article 2 (2) currently states “EEE that was outside the scope of RoHS-1, but which would not comply with RoHS-2, may continue to be **made available** on the market until **22 July 2019**”.
 - “making available on the market” means any supply of an EEE on the EU market.
- ❑ In other words, RoHS-2 Article 2 (2) currently prohibits resale of non-compliant **second-hand EEE or refurbished EEE** falling into Category 8 (Medical Devices), Category 9 (Industrial Monitoring and Control) and Category 11 (other EEE) after **22 July 2019**.
- ❑ On 15 October, 2017, the Parliament approved amended texts to correct Article 2 (2) to apply to EEE **placed on the market**.
 - “placing on the market” means making available on the EU market for the first time.
- ❑ The change will facilitate repair, replacement of spare parts, refurbishment and reuse of electrical and electronic equipment, such as refurbished medical equipment for instance. The review will remove unnecessary barriers to secondary market operations and foster the transition towards a circular economy.

RoHS-2 Exemptions - General

- ❑ Several requests to renew existing exemptions as well as requests for new exemptions were submitted to the European Commission in the period October 2014 to January 2018.
- ❑ Existing exemptions for which a renewal request has been submitted remain valid until a decision on the renewal request is taken by the Commission.
- ❑ The Commission decision on renewal request(s) for an exemption will either indicate the new expiry date in case of renewal, or, in case of rejection, grant a transition before the exemption expires, i.e. a period of minimum 12 months, maximum 18 months following the decision date.
- ❑ In contrast, exemptions for which no application for renewal was submitted in due time will expire on the date specified in RoHS 2 Article 5 or in RoHS-2 Annexes.
- ❑ Since the publication of RoHS-2 in 2011, the Commission has launched 14 stakeholder consultations covering **147 applications**, both for new exemptions and for the renewal of existing exemptions.

2017 Commission Delegated Directives

- ❑ The European Union officially published **four** RoHS Annex III exemption extensions:
 - Commission Delegated Directive (EU) 2017/1009: modifies and extends **exemption 13(b)** of Annex III (Cadmium and lead in filter glasses and glasses used for reflective standards).
 - Commission Delegated Directive (EU) 2017/1011: extends **exemption 13(a)** of Annex III (Lead in white glasses used for optical applications).
 - Commission Delegated Directive (EU) 2017/1010: extends and modifies **exemption 9(b)** of Annex III (Lead in bearing shells and bushes for certain refrigerant-containing compressors.)
 - Commission Delegated Directive (EU) 2017/1975: **exemption 39(a)** of Annex III for cadmium in color converting light-emitting diodes (LEDs) for use in display systems.

2018 Commission Delegated Directives

❑ Six new draft Delegated Directives implementing the renewal of Annex III exemptions were released:

- Commission Delegated Directive (EU) 2018/240 of March 1st, 2018: **Exemption 6(b)** - for lead as an alloying element in aluminum.
- Commission Delegated Directive (EU) 2018/741 of March 1st, 2018: **Exemption 6(c)** for lead as an alloying element in copper.
- Commission Delegated Directive (EU) 2018/742 of March 1st, 2018: **Exemption 7(a)** - Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).
- Commission Delegated Directive (EU) 2018/736 of Feb. 2nd, 2018: **Exemption 7(c)-I** for certain electrical and electronic components containing lead in glass or ceramic.
- Commission Delegated Directive (EU) 2018/737 of Feb. 27th, 2018: **Exemption 24** - Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors
- Commission Delegated Directive (EU) 2018/738 of Feb. 27th, 2018: **Exemption 34** - Lead in cermet-based trimmer potentiometer elements.

New Batch of Draft Delegated Directives



- ❑ Feb. 15th, 2018: The European Commission Environment Directorate-General has initiated another batch of **eight** Draft Delegated Directives to amend Annex III exemptions based on applications filed to extend their validity.
- ❑ The drafts give the Member States twelve months after the directives themselves come into force to “adopt and publish” these revisions.
- ❑ The revisions come into force themselves the next day. At that time manufacturers and suppliers will have to revise compliance documentation to reflect any revised exemptions.
- ❑ The comment period for this batch, which includes action on Annex III exemptions 7(c)-II, 7(c)-IV, 8(b), 15, 21, 29, 32 and 37, was open until March 15, 2018.

Exemptions: Observations So Far

- ❑ Okeo Institute (collaborating Fraunhofer IZM Institute) is currently working on three Packs:
 - **Pack #13** includes **one** exemption, 1 (g), (mercury in single - capped (compact) fluorescent lamps) and two new exemptions requests.
 - **Pack #14** covers in total **eight** exemption requests: three requests for the renewal of existing exemptions (#41 in Annex III and #37 & #41 in Annex IV) and five requests for new exemption.
 - **Pack #15** covers evaluation of **new substances** to be added to the existing 10, see next slide.







New Potential Restricted Substances (Pack #15)

- ❑ The process for restriction of 7 additional substances under EU RoHS has begun with a meeting of the RoHS Expert Group on March 27th, 2018.
- ❑ Stakeholders are able to publicly comment on the proposal until June 15th, 2018.
- ❑ Many of the additional substances are in very common use.
 - Diantimony trioxide
 - Tetrabromobisphenol A (TBBP-A)
 - Indium phosphide
 - Medium Chain Chlorinated paraffins (MCCPs)
 - Beryllium and its compounds
 - Nickel sulphate and Nickel sulfamate
 - Cobalt dichloride and Cobalt sulphate
- ❑ The first five are widely used in a wide variety of consumer, commercial and industrial EEE. The latter two are either intermediate process chemicals or are used in a much narrower scope of product types.







Enforcement

Examples of product withdrawals for RoHS-2 non-compliance in 2015

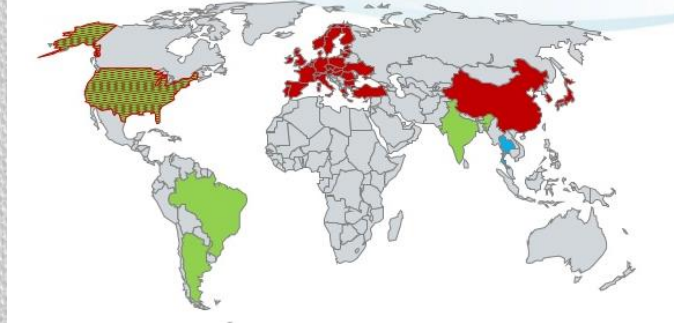
Product	Country	Non compliance	Enforcement
OVADO / ZEILO LED lamp 	Germany Dec 2015	Product materials contain > 0.1% w/w of lead.	Voluntary product withdrawal
AVIA radio alarm clock 	Slovenia Jan 2015	Black plastic antenna wire and orange plastic of capacitor 0.19% lead. Solder on PCB contains 0.071% cadmium	Voluntary product withdrawal
SIMPEX food blender 	Slovenia Jan 2015	Solders on PCB and in motor contain 80% lead	Voluntary product withdrawal
FOREVER charger 	Slovenia Jan 2016	Solders in plug and on PCB contain 84% lead and 1.1% cadmium	Compulsory product withdrawal

Enforcement (cont.)

Examples of product withdrawals for RoHS2 non-compliance in 2016-2017

Product	Country	Non compliance	Enforcement
Kimura Alarm clock 	Germany March 2017	Alarm clock contains a tilt switch filled with approx. 10 µl of mercury.	Voluntary product withdrawal by importer
JOHNTOY Electric toy boat 	Estonia Jan 2017	Solder contains 35.7% lead	Voluntary recall of the product from end users by retailer
Biltema Head torch 	Norway Dec 2016	Plastic buckles used for securing the ribbons contain 0.28% by weight deca-BDE	Mandatory product withdrawal by importer
Søstrene Grenes USB cable 	Norway July 2016	Solder on USB cable contains 42% lead	Voluntary product withdrawal by importer

RoHS Worldwide



RoHS Worldwide

China RoHS-2



- ❑ On March 15 2017, the Ministry of Industry and Information Technology released the first "Compliance Management Catalog" of EEPs that will be subject to restrictions, containing 12 product types. Effective as of March 12th, 2019.
- ❑ Surprisingly, the conformity assessment system required by Article 18 of the China RoHS Regulation has not been released for public review yet.

Product Type	
Refrigerators	Fax Machines (!)
Air Conditioners	TV Sets
Washing Machines	Monitors
Water Heaters	Microcomputers
Printers	Cell phones
Copiers	Telephones

China RoHS-2 Exemptions



- ❑ All current exemptions in EU RoHS-2 Annex III are included in draft China RoHS exemptions list as direct translations without any expiry dates.
 - Draft China RoHS exemptions list includes all new exemptions added to EU RoHS-2 Annex III since 2011.
- ❑ All EU RoHS-2 Annex III which have already expired in the EU would still be valid for use in China.
 - Products which can no longer be sold in the EU because the exemption has expired could still be sold in China.
- ❑ Exemptions numbering is different from EU RoHS.
- ❑ Exemptions do not have expiration date (excluding one).

China RoHS-2 Additional Info

- ❑ Marking of packaging is no longer mandatory under China RoHS-2.
 - But Article 12 does require compliance with packaging standards and use of materials that are “*non-hazardous, easily degradable, facilitate recycling and reuse*”.
- ❑ China RoHS-2 references a “conformity assessment system” which will be drafted by MIIT.
 - Expected to be more flexible and is likely to align more closely with the EU RoHS-2 conformity assessment system, which is based on the EN 50581 standard.



Taiwan RoHS



- ❑ From July 1, 2017, BSMI certification includes the Taiwan RoHS marking requirement in the inspection standard for EEE. The changes mean the word “RoHS” must be included on CI MARK EEE products.
- ❑ The Taiwan RoHS has MCVs (max. concentration value) that are the same as those contained within the EU RoHS, although it does not cover phthalates, which are included under EU regulations.
- ❑ It seems the standard (CNS 15663) will take advantage of the same exemptions as the EU RoHS.
- ❑ Taiwan’s RoHS will be implemented in a number of stages:
 - July 1, 2017 – certain IT and audio/visual products, including: network media players (wired network media players) and projectors; automatic data processing machines; printing and copying machines; televisions; monitors and monitors used in automatic data processing, etc.
 - January 1, 2018 – a wide range of EEE, including: self-ballasted fluorescent lamps; plugs and socket-outlets for fixed wiring; IT and audio-video products, including radio keyboard; motor class goods, e.g. single-phase AC motors; home appliances, e.g. electric blankets; water dispensers; power supplies, battery chargers for computer, communication and consumer electronics; AC supplied electronic ballasts for fluorescent lamps; printing and copying machines (new listed goods).
 - July 1, 2018 – eight more items, including air conditioners and lighting.

BSMI=Bureau of Standards, Metrology and Inspection



India & Vietnam RoHS

- ❑ **India** RoHS restricts the original six substances (no word on phthalate restrictions, yet), but has a much narrower scope, and requires submission of documentary evidence of compliance to the government as a condition of sale while the EU only requires its collection and management.
- ❑ **Vietnam** RoHS restricts the same original six substances, and actually has the same scope as the original EU RoHS Directive 2002/95/EC, but requires disclosure of the compliance status of products sold in Vietnam on the manufacturer's website, in product documentation, or elsewhere, which EU RoHS does not require.



Singapore RoHS



- ❑ Singapore's regulation, S 263/2016, came into force on June 1, 2017. This regulation updates the Second Schedule, Control of Hazardous Substances, in Singapore's Environmental Protection and Management Act.
- ❑ While the six hazardous substances mirror those of the original EU RoHS Directive, the scope is a narrowly defined subset. Only the following products that are “designed for household use” are included today:
 - Air conditioners
 - Flat panel display televisions over 11 inches in width
 - Mobile phones
 - “Phablets”
 - Portable computers
 - Refrigerators
 - Washing machines

Ukraine RoHS



- ❑ Ukraine is interested in becoming an EU Member State; therefore, it has been trying to bring its regulatory structure in line with that of the EU.
- ❑ On March 10, 2017, the Cabinet of Ministers of Ukraine issued Decree No. 139, which mirrors the Recast EU RoHS Directive.
- ❑ While the scope is consistent with EU RoHS, the in-force dates are not:
 - From 22 September 2017, RoHS declaration is required for products manufactured in or introduced into Ukraine.
 - Between January 1, 2018 and July 22, 2021, RoHS declaration is required for equipment in categories 8, 9 and 11.

Eurasian Economic Union (EAEU)

EAEU members: Armenia, Belarus, Kazakhstan, Kyrgyz Republic and Russia

- ❑ TR EAEU 037/2016 came into force on 1 March 2018.
- ❑ Restricts the same 6 substances as in EU RoHS-2.
- ❑ Does not restrict the additional 4 phthalates (yet).
- ❑ Differences in products in scope, conformity assessment, transitional provisions and labeling & marking requirements.
 - No reference to medical devices and measuring instruments.
 - Not adopted the open scope category newly introduced.
 - Compliance labeling is required.
- ❑ Majority of special exemptions/restrictions laid down in Annex 3 to the EAEU RoHS are identical to those appearing in Annex III of the EU RoHS-2 Directive.



United Arab Emirates (UAE)

- ❑ On 27 April 2018, UAE's ESMA (Emirates Authority for Standardization and Metrology) finally published Regulation No. 10, 2017, Restrictions on the Use of Hazardous Materials in Electronic and Electrical Devices Control Scheme, or "UAE RoHS".
- ❑ Based on EU-RoHS, with few changes.



EU WEEE

Until 14 August 2018

□ Products are in scope if they fall into one of the ten categories defined in Annex I:

- Large household appliances
- Small household appliances
- IT & telecommunications equipment
- Consumer equipment
- Lighting equipment
- Electrical & electronic tools
- Toys, leisure & sports equipment
- Medical devices
- Monitoring & control instruments
- Automatic dispensers



From 15 August 2018

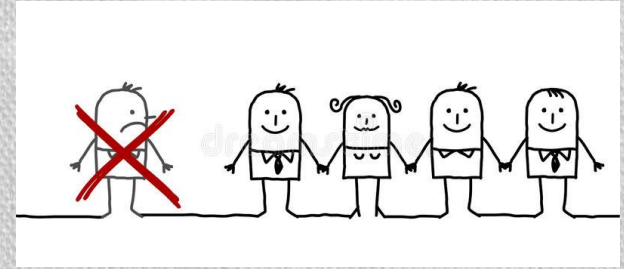
❑ Based on Article 2, para 1(b): All types of products are in scope and fall into one of six categories defined in Annex III (unless the product is explicitly excluded under Article 2 of the Directive, see next slide):

- Temperature exchange equipment
- Screens, monitors and equipment containing screens having $>100\text{cm}^2$ surface
- Lamps
- Large equipment (any external dimension $>50\text{cm}$)
- Small equipment (no external dimension $>50\text{cm}$)
- Small IT and telecommunication equipment (no external dimension $>50\text{cm}$)



Product Explicitly Excluded

- Equipment designed exclusively for military purposes or sent into space.
- Large-scale stationary industrial tools.
- Equipment specifically designed and installed to large-scale fixed installations or other equipment which is excluded from the WEEE Directive.
- Filament bulbs.
- Means of transport for persons or goods, excluding electric two-wheel vehicles which are no type-approved.
- Non-road mobile machinery exclusively for professional use.
- Equipment specifically designed for research and development (B2B only).
- Medical devices and in vitro diagnostic medical devices, where such devices are expected to be infective prior to end of life, and active implantable medical devices.



Electric Generators and Open Scope

- ❑ Combustion engine power equipment, such as electric generators, do not use electricity as the primary energy source.
- ❑ Under Annex 1 EEE product categories, many EU countries did not include electric generators in scope of their WEEE regulations.

Country	Are electric generators in scope of ten categories in Annex 1?
France	No
Germany	Yes
Italy	No
Sweden	Yes
United Kingdom	Yes

Electric Generators and Open Scope – Cont.

- ❑ From 15 August 2018, electric generators will now be included under Annex 3 (open scope) WEEE product categories in all EU countries.

Country	Are electric generators in scope of six categories in Annex 3 (open scope)?
France	✓
Germany	✓
Italy	✓
Sweden	✓
United Kingdom	✓

Printer Cartridges

- ❑ As of August 15th 2018, printer cartridges containing electrical parts such as a chip will have to be reported and compliant with WEEE legislation in each EU member state.
 - It is already the case in some countries such as Germany or Belgium before this date, but it is not yet required in all other EU countries.
 - Cartridges in many cases fall into the category “small equipment” or “small IT and telecommunication equipment” usually with a connection to the previous categories (annex 2 of directive 2012/19/EU).



wiseGEEK

WEEE Worldwide

India WEEE

- ❑ Companies importing products into India using their own IEC code must obtain EPR (Extended Producer Responsibility plan) authorization under the E-Waste (Management) Amendment Rules which came into force on 22 March 2018.
- ❑ It can take up to 120 days to gain EPR Authorization and this can impact product sales in India.



Canada WEEE

- ❑ 'Brand holders' will need to comply with new e-waste collection and recycling obligations in Ontario, Canada from 1 July 2020.
- ❑ Producer Responsibility Organizations will be introduced to replace existing e-waste diversion programs and will allow the transition to individual producer responsibility under the Resource Recovery and Circular Economy Act, 2016.
- ❑ A wider range of products now need to comply with recycling obligations in Saskatchewan, Canada, under the Electronic Equipment Stewardship Regulations which came into force on 1 May 2018. The expanded scope now includes more consumer electronics, computer equipment and printing products.



EU REACH



Guidance on Requirements for Substances in Articles

- ❑ June 2017: ECHA released [version 4 of the Guidance on Substances in Articles](#).
- ❑ This implements the revised definition of "Article" based on the judgement of the EU Court of Justice back in September 2015.
- ❑ Note that new terminology has been introduced to define “complex objects”, which consist of many articles.
- ❑ Example 21 is all about PCBs, but is focused on evaluating what is an article on it. This is useful and important, but is not the complete story. The opportunity to discuss the adhesives and solders, the potential presence of SVHCs in them and how to measure them against the articles and complex objects they attach is missed.



Enforcement

- ❑ 13.03.18: Inspectors in 27 European countries checked 1,009 mixtures, 4,599 articles and 17 substances. Overall, out of 5,625 targeted product checks, **18% did not comply with the restrictions.**
- ❑ The most frequent breaches were:
 - phthalates in toys (20% of inspected toys)
 - cadmium in brazing fillers (14%)
 - asbestos fibers in products (14%)
 - chromium VI in leather articles (13% of the tested products)
 - cadmium in jewelry (12%)







Enforcement (cont.)

Product withdrawals for REACH restriction of Asbestos:

Product	Country	Non compliance	Enforcement
Eurom electric heater 	Netherlands June 2015	Product contains Asbestos	Voluntary product withdrawal
FMS electric tea maker 	Germany Sept 2010	Product contains Asbestos	Voluntary product withdrawal. Sales ban ordered by the authorities

Enforcement (cont.)

Polycyclic Aromatic Hydrocarbons (PAHs) are restricted under REACH Annex XVII at 0.0001% (1 ppm) in plastic or rubber materials that come into contact with skin.

Product	Country	Non compliance	Enforcement
Unknown remote control car 	Germany March 2015	Plastic contains 0.0874% polycyclic aromatic hydrocarbons (PAH), including including 0.0037% benzo(a)pyrene	Import rejected at border
Kids Fun toy car 	Germany & Netherlands July 2016	Tyres contain 0.0179% PAH.	Product withdrawal by retailer
Product	Country	Non compliance	Enforcement
Primark, Men's flip-flops 	Germany, July 2017	The product contain polycyclic aromatic hydrocarbons (PAHs), including chrysene (measured values: chrysene: up to 2.9 mg/kg; total of PAHs up to: 9.4 mg/kg).	Recall of the product from end users, Withdrawal of the product from the market
Work-It, Rubber Hammer 	Netherlands, Dec 2016	The handle contains the polycyclic aromatic hydrocarbon (PAH) chrysene (measured concentration 214 mg/kg).	Withdrawal of the product from the market

SVHC List Update

- ❑ 09.07.18: One SVHC was added to the Candidate List.
- ❑ 15.01.18: Seven new SVHCs were added to the Candidate List, and the entry for bisphenol A (BPA) was updated.
 - Only 4 out of the 7 are in use in the EEE equipment. IEC 62474 was amended accordingly (see slide #67).
- ❑ The total number of SVHCs now is 181.



Authorization List Update

- ❑ July 2017: An update to the Authorization List of REACH (Annex XIV) has been published.
 - 12 new substances are now subject to authorization for being used after the sunset date.
- ❑ The list was last updated on 18 December 2017. Database contains 43 unique substances/entries.



Restricted Substances Update

- ❑ Don't forget that **Annex XVII restrictions apply to your products too!** It's not just SVHCs you have to ask your suppliers about. How many REACH "declarations" do you receive that are only about SVHCs?
- ❑ **Commission Regulation (EU) 2017/1510:** On August 30th, the European Commission added 20 substances to the REACH Annex XVII restricted substances list (The former update to REACH Annex XVII was in October 2016).
- ❑ The prohibition of these substances is effective March 1, 2018.
- ❑ As of 08 May 2018, database contains 68 unique substances/entries.



Turkey REACH

- ❑ On 23 December 2017, KKDIK was published in the Turkey's Official Gazette. This Regulation is modelled on REACH Regulation.
- ❑ The regulation **does not cover** the following:
 - Radioactive substances and mixtures;
 - Goods, mixtures or articles in transit and goods in free-zone for re-export;
 - Non-isolated intermediates;
 - Transport of dangerous substances and mixtures by various modes;
 - Substances manufactured or imported for defense purpose;
 - Medicinal products;
 - Veterinary products;
 - Medical devices;
 - Cosmetic products;
 - Food and feeds;





USA Conflict Minerals

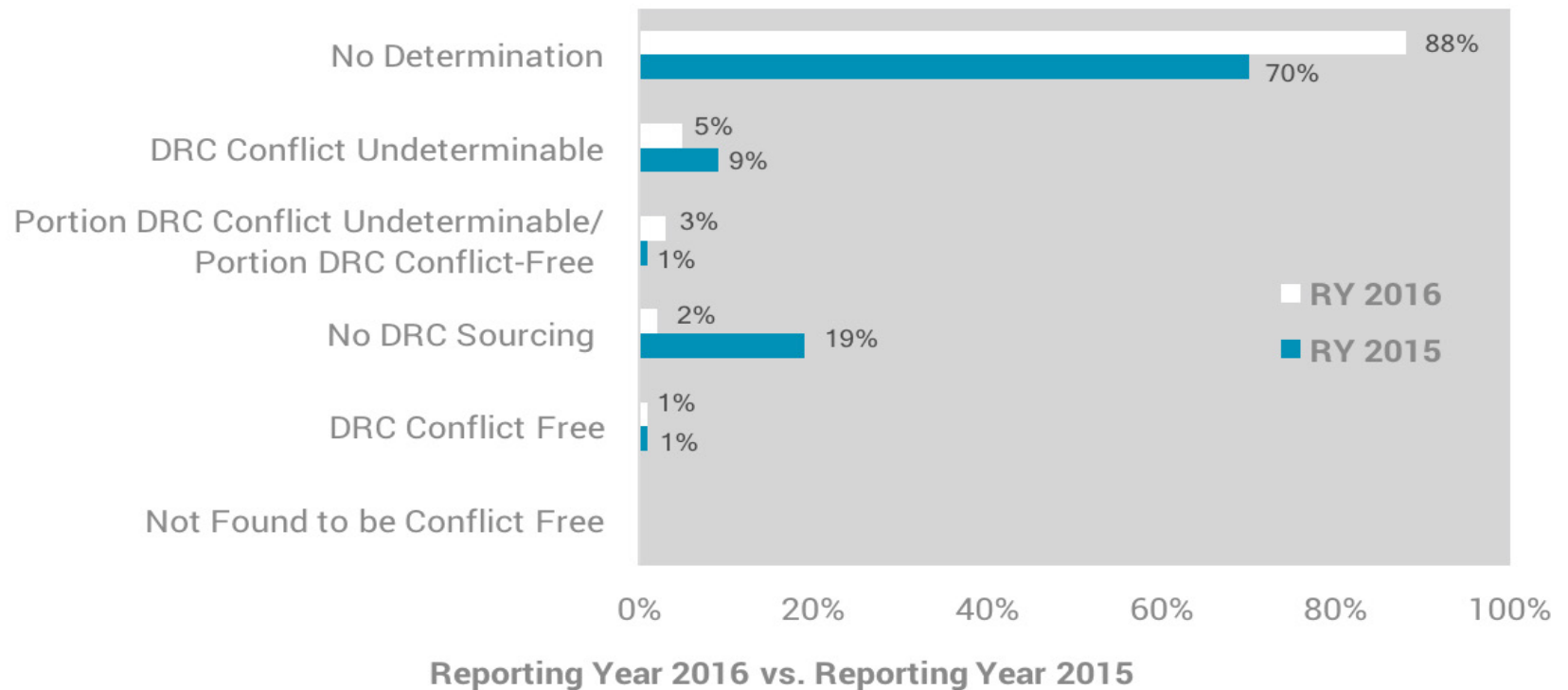
RX2016 SEC Filings



- ❑ The 2017 sec filings mark the fourth year of conflict minerals reporting. Filings related to conflict minerals RX2016 were due on may 31st, 2017.
- ❑ As of August 11, 2017 there have been 1,154 reports (Form SDs) filed since the beginning of 2017 for RX2016 (in contrast to the 1,219 reports that were filed by August 11, 2016 for RX2015 filings).
- ❑ Of the 1,154 filers for RX2016, 910 (roughly 79%) submitted a Conflict Minerals Report (CMR). This ratio decreased slightly from RX2015 with a ratio of close to 81%.

RY2016 SEC Filings (cont.)

Sourcing Determination



RY2016 SEC Filings (cont.)

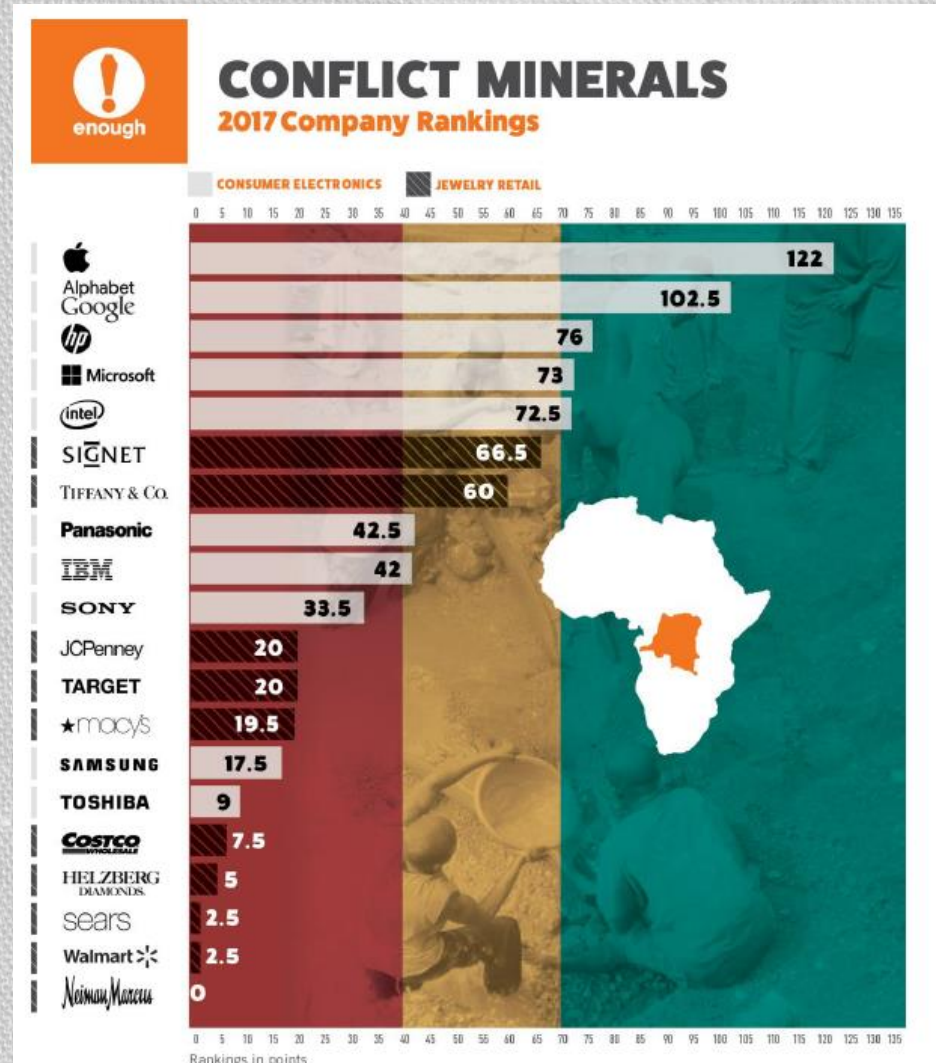
IPSA

- ❑ For RY2016, 16 companies performed an independent private sector audit (IPSA), a decrease of 15% from RY2015.
- ❑ Of the 16 companies that performed an IPSA, 10 voluntarily elected to disclose their products as “DRC conflict free.”
- ❑ Of the remaining 6 companies that conducted an IPSA, 3 were “Portion DRC Conflict Undeterminable and Portion DRC Conflict-Free”, 2 filed No Determination and 1 was “DRC Conflict Undeterminable.”



Enough Project Ranking for RY2017

Examined 20 of the largest companies, as defined by market capitalization, in two of the industries which consume the most tin, tungsten, tantalum, and gold: consumer electronics and jewelry retail.



CMRT Template

- ❑ April 27, 2018, the Responsible Minerals Initiative (RMI) released the new CMRT version 5.11.
- ❑ The **major** changes:
 - Corrections to all bugs and errors
 - Update to ISO country, state and province lists
 - Enhancements which do not conflict with IPC-1755
 - Updates to the Smelter Reference List and Standard Smelter List
 - Updates to reflect the organization's rebrand from CFSI to RMI
- ❑ The next version of the CMRT is anticipated to be released in November, 2018 with no major revisions.



Country of Origin is NOT Smelter/Refiner Location!

- ❑ Some issuers continue to file Conflict Minerals Reports without including a smelter/refiner list. Omitting this list from the SEC submittal is inconsistent with the rule.
- ❑ Some issuers continue to be confused by “country of origin” versus “smelter location.” **Country of origin is where the rocks come out of the ground, regardless of where they end up for processing. Smelter location is where the rocks are processed.**
- ❑ Since there are no 3TG processing facilities in the Covered Countries at this time, the smelter location does not inherently indicate or exclude Covered Countries as a Country of Origin. Listing only smelter/refiner location in the SEC submittal is inconsistent with the rule.



Smelters & Refiners Sourcing Risk

- ❑ The risk of sourcing from smelters and refiners that may be supporting conflict has **decreased**, since the number of smelters and refiners that are conformant with an independent third-party audit protocol (conflict-free) has dramatically increased since the adoption of the Rule.
- ❑ There are now over 250 conformant smelters and refiners engaged with an audit program.
 - 98% of tantalum smelters
 - 89% of tin smelters
 - 91% of tungsten smelters
 - 70% of gold refiners
- ❑ As a result, even though companies are receiving data from suppliers at the suppliers' company level and gaps in reporting still exist, a large percentage of the smelters and refiners being identified are conformant with or active in an audit program.



Legal Developments Under The Rule

- ❑ In 2012, shortly after the Rule was adopted, it was challenged in court by several business groups.
- ❑ On April 3, 2017, the U.S. District Court for the District of Columbia issued a **final judgment** in the litigation, on remand from the Court of Appeals, finding that:
 - Section 1502 and the Rule violate the First Amendment to the U.S. Constitution to the extent that the statute and the Rule require companies to report to the SEC and state on their websites that any of their products “have not been found to be ‘DRC conflict free.’”
 - The Rule is unlawful to the extent that it requires companies to report to the SEC and state on their websites.



California Prop-65



What are Safe Harbor Levels?



- ❑ Acceptable Levels of Exposure that do not required a Prop-65 warning.
- ❑ For carcinogens, the safe harbor levels are called **No Significant Risk Levels** (NSRL).
- ❑ For reproductive toxins, the safe harbor levels are called **Maximum Acceptable Dose Levels** (MADL).
- ❑ Safe harbor levels have not been established for all Prop-65 listed chemicals:
 - Carcinogens: over 500 chemicals are listed, but only ~ 300 of those have established NSRL.
 - Reproductive Toxins: over 300 chemicals are listed, but only ~ 45 of those have established MADL.

Enforcement

- ❑ No regulatory agency oversight.
 - OEHHA lists chemicals and identifies exposure levels, but does not enforce the act itself.
 - Enforcement is determined by lawsuit.
 - Attorney General or District Attorney can file enforcement action without notice.
 - Any private person may sue if no prosecutor takes the case within 60 day notice of violation.



Potential Costs of Litigation

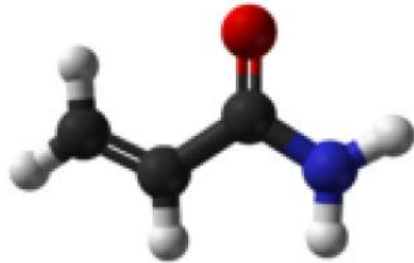
- ❑ In 2017 the total settlement payments were \$25,767,500.
- ❑ Attorney fees paid \$19,486,362.
- ❑ Individual settlement payments range from \$6,000 to over \$300,000.
- ❑ In 2017, total number of settlements was 688.
- ❑ Average cost per settlement including attorney fees was \$65,776.



Frequent Enforcement Targets

Chemicals

- Lead
- Phthalates
- Cadmium
- Flame retardants
- Acrylamide



Materials

- Ceramics
- Brass
- PVC/Vinyl



Products

- Children's products
- Household Items
- Jewelry
- Tools




New Warning Label Regulation

❑ Current safe harbor warning

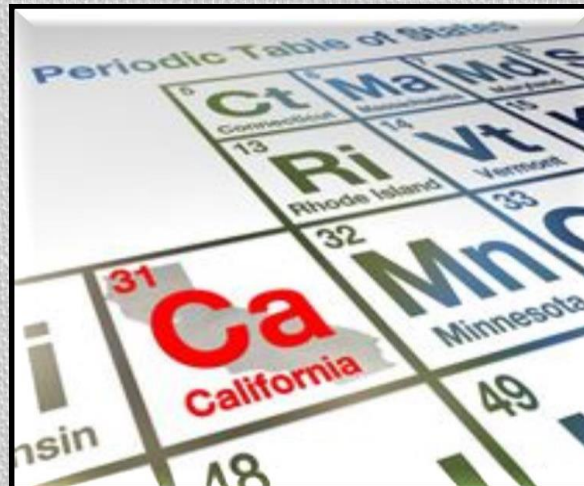
- If product contains one of the listed Prop-65 chemicals then a warning label is required:
 - ✓ **Example: WARNING:** This product contains a chemical known to the State of California to cause cancer.

❑ As of Aug. 30, 2018, “*This product contains*” will change to “*This product can expose you to*”.

- The warning label must contain at least one chemical name.
- If chemicals A and B are present, then label must contain A or B, or both
 - ✓ OEHHA website URL
 - ✓ Warning Symbol: 
 - ✓ **Example: WARNING:** This product can expose you to chemicals including arsenic, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.
 - ✓ If consumer information is in a language other than English, then the warning must also be provided in that language in addition to English.

New Warning Label Regulation – cont.

- ❑ Consumer products manufactured prior to August 30, 2018 will not require new warnings if they meet existing safe harbor requirements.
- ❑ California Publishes [Q&A](#) on New Prop-65 Warning Requirements.



Batteries

Worldwide New Batteries Restrictions

- ❑ **Japan** METI - excluded portable lithium ion storage batteries with built-in lithium ion storage batteries from the scope of regulated products under the PSE Act. Effective February 1, 2019.
- ❑ **Argentina** published a Bill proposing minimum environmental protection requirements for the management of batteries and accumulators .
- ❑ In **Brazil** tnemssessa ytimrofnoc mumimin gnihsilbatse tcA na , ni sregrahc dna seirettab muihtil yradnoces rof stnemeriuqer detcane saw senohp elibom.
- ❑ **Singapore** enhanced the mercury restrictions for batteries and button cells listed under the Environmental Protection and Management Act.



Various



Persistent Organic Pollutants (POPs) Regulation 850/2004

- ❑ POPs regulation contains 24 substance restrictions.
- ❑ 15 restrictions are not relevant to electrotechnical articles.
- ❑ Nine POPs restrictions are relevant to mechanical and electrical parts, but 4 are already covered by RoHS.

POPs restricted substance	Threshold
Protective coatings which are resistant to water, oils, etc	
Perfluorooctane Sulfonates (PFOS)	0.1% (1 000 ppm) by weight in a material
Flame retardants	
HBCDD (Hexabromocyclododecane)	0.01% (100 ppm) by weight in a material
Shortchain chlorinated paraffins (C10 – C13)	0.15% (1 500 ppm) by weight in a material
Tetrabromodiphenyl ether – <i>except EEE covered by RoHS</i>	0.001% (10 ppm) by weight in a material
Pentabromodiphenyl ether – <i>except EEE covered by RoHS</i>	0.001% (10 ppm) by weight in a material
Hexabromodiphenyl ether – <i>except EEE covered by RoHS</i>	0.001% (10 ppm) by weight in a material
Heptabromodiphenyl ether – <i>except EEE covered by RoHS</i>	0.001% (10 ppm) by weight in a material
Plasticisers, flame retardants and dielectrics	
Polychlorinated biphenyls (PCBs)	No intentionally added content
Polychloronaphthalenes	No intentionally added content

POPs Regulation 850/2004 (cont.)

❑ Short Chain Chlorinated Paraffins (SCCP)

- Regulation 519/2012 published June 2012 banned “articles” containing intentionally added SCCP from 10 July 2012.
- Regulation 2015/2030 published Nov 2015 amended 2012 restriction because SCCP found as an impurity (e.g. in MCCP). “Articles” containing SCCPs > 0.15% banned from 4 Dec 2015
- Netherlands ban on SCCPs in Articles:
 - ✓ Article 2(1) of Staatsblad van het Koninkrijk der Nederlanden, Jaargang 1999, 478: “SCCPs may not be used”




❑ POPs Regulation uses same definition of an “Article” as REACH

- “Once an Article Always an Article”





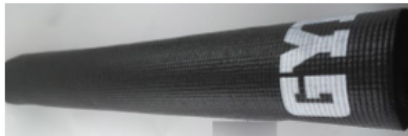
POP Enforcement

Product withdrawals for POPs restriction of SCCP started in 2015 in Sweden, Austria and Norway

Product	Country	Non compliance	Enforcement
VIVANCO earphones 	Austria March 2015	Product contains 0.28% short chain chlorinated paraffins (SCCP).	Compulsory product withdrawal
MENUETT kettle 	Sweden Nov 2015	Plastic in the cable contains 0.5% short chain chlorinated paraffins (SCCP)	Voluntary product withdrawal
EUROPRIIS extension cable 	Norway Jan 2016	Plastic in the cables contains 1.7% short chain chlorinated paraffins (SCCP)	Compulsory product withdrawal

POP Enforcement (cont.)

Examples of product withdrawals for POPs restriction of SCCP in 2017 in Sweden

Product	Country	Non compliance	Enforcement
Handtag Gummi bicycle grips 	Sweden Feb 2017	Plastic in the handle contains lead (measured value up to 0.35% by weight), short chain chlorinated paraffins (SCCPs) (measured value up to 0.97% by weight) and polyaromatic hydrocarbons (PAHs) (measured value of PAHs 1560 mg/kg).	Mandatory product withdrawal by importer
ADAMANT Hammer 	Sweden Jan 2017	Rubber in the handle of the hammer contains lead (measured value up to 0.28% by weight), short chain chlorinated paraffins (SCCPs) (measured value up to 0.77% by weight) and polyaromatic hydrocarbons (PAHs) (measured value of PAHs 1220 mg/kg).	Voluntary product withdrawal by importer
Iron Gym Yoga mat 	Sweden Jan 2017	Plastic in the yoga mat contains up to 0.8% short chain chlorinated paraffins (SCCP).	Voluntary product withdrawal by retailer

IPC-1754A: Material Declaration Standard for Aerospace and Defense



- ❑ Published Date: 4/2/2018.
- ❑ IPC-1754 is a standard XML template that may be flowed across supply chains in virtually any industry.
- ❑ The template incorporates a set of core mandatory data elements, while also providing space for optional, customizable data fields to suit any industry's DSLs (Declarable Substance List).
- ❑ Unlike other standards, IPC-1754 permits the exchange of data on chemical substances that may not only be present within products, but may also be used in the production process, embedded operations, ongoing maintenance and repair, or refurbishment of a supplied product or sub-product.

IPC-1754A (cont.)

<p><u>IPC-1751A</u> <i>Generic Requirements for Declaration Process Management (with Amendment 1)</i> Latest revision: December 2012</p>	<p>Provides basic supplier/requestor details for declarations.</p>
<p><u>IPC-1752A</u> <i>Materials Declaration Management Standard (with Amendments 1 & 2)</i> Latest revision: February 2014</p>	<p>Allows companies in the supply chain to share information on materials in products.</p>
<p><u>IPC-1753</u> <i>Laboratory Declaration Standard</i> Latest revision: November 2013</p>	<p>Facilitates the exchange of laboratory chemical analysis reports between supply chain members.</p>
<p><u>IPC-1755</u> <i>Conflict Minerals Data Exchange Standard</i> Latest revision: March 2014</p>	<p>Allows companies in the supply chain to exchange information related to conflict minerals.</p>
<p><u>IPC-1758</u> <i>Declaration Requirements for Ship, Pack, and Packing Materials</i> Latest revision: March 2012</p>	<p>Allows companies in the supply chain to exchange information regarding the materials used to protect products during shipment between supply chain partners.</p>

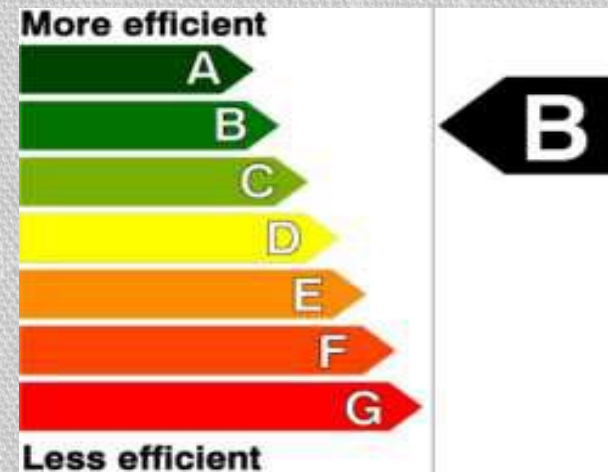
IEC 62474 Declarable Substances List Update



- ❑ On 3 September 2017, the IEC 62474 Declarable Substances List was updated to version D14.00:
 - 14 substances were added
 - The reference substance name “Lead hydrocarbonate” was replaced by “Trilead bis(carbonate) dihydroxide” and the duplicate reference substance “Lead (II) carbonate basic” (same CAS, different name) was deleted.
- ❑ On Jan. 15th 2018 the IEC 62474 database was updated to version D15.00
- ❑ On April 5th 2018 the IEC 62474 declarable substance list and reference substance list were updated to revision D15.01.

Energy Labelling Directive

- ❑ Framework Regulation (EU) 2017/1369 of 4 July 2017, replaces Directive 2010/30/EU. Effective as of 1 August 2017.
- ❑ Article 4 concerning the obligations of suppliers in relation to the product database shall apply from 1 January 2019.
- ❑ The definition of energy-related products has been extended to any ‘system’ with an impact on energy consumption during use, in addition to ‘goods’.
- ❑ Simple “A to G” labelling scale.
- ❑ New online product database.



Any Question?



Wow. That was a lot of information.



Mind = Blown

Thank you!

**Need further clarifications?
Need support in implementation?
Need general consultancy?**

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