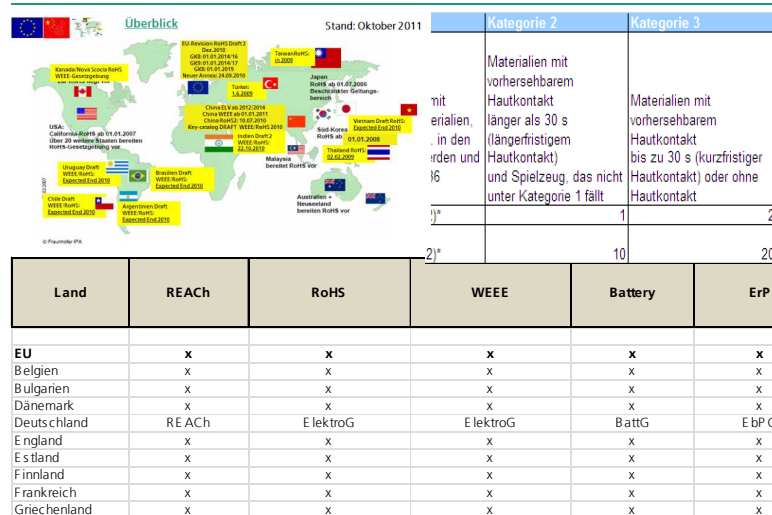


GLOBAL WEEE AND ROHS – FURTHER STEPS

Markus Hornberger

Überblick über die weltweite Schadstoffgesetzgebung - Global WEEE and RoHS - Further steps

- RoHS, REACH, ELV, WEEE
- EU, Japan, China, Korea, Kalifornien, USA, Indien, Brasilien, Kanada, ...



**ExFo 2011
Abschlusstagung
06. Dezember 2011,
Stuttgart**

**Markus Hornberger
Fraunhofer-Institut IPA,
Stuttgart**

**Tel.: 0711/970-1301
Email: myh@ipa.fhg.de**

**Schadstoffmanagement in der
Produktion**

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Weltweite Compliance-Anforderungen Aufgaben eines Schadstoffmanagementsystems

Einzelne Schritte zur Einhaltung der Produktkonformität:

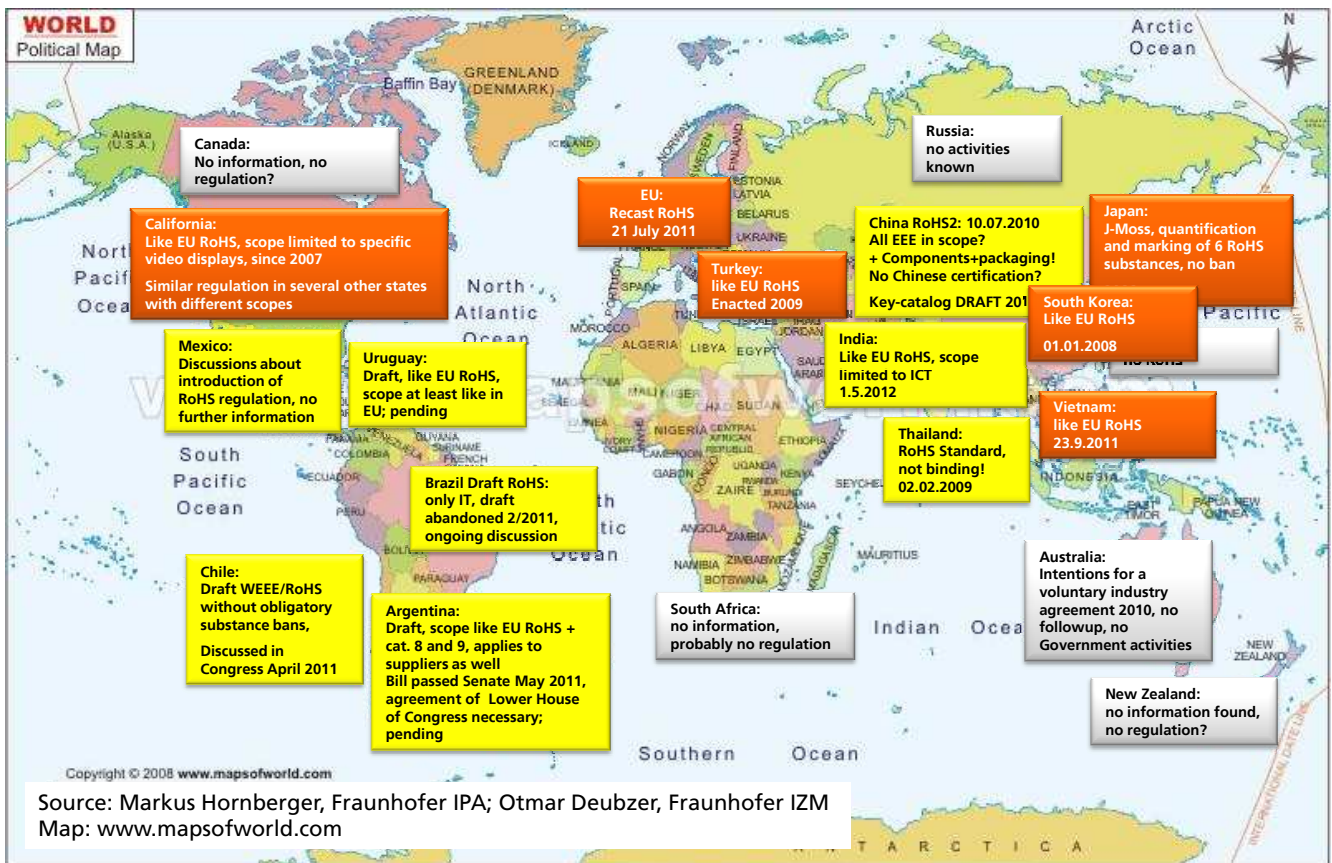
- Screening der globalen Gesetzeslage, nationalen und international betroffenen Verbänden, Normungsgremien und Unternehmen
- Einschätzung bezüglich Betroffenheit (wirtschaftl./produktionstechn. Auswirkungen)
- Bewertung und Reporting der aktuellen Ist-Situation im Unternehmen sowie Ableitung von Maßnahmen
- Umsetzung von Maßnahmen zur Sicherstellung der Konformität
- Entwicklung von unternehmensbezogenen Managementleitlinien zur kontinuierlichen Einbindung der globalen Schadstoffkonformität
- Aufbau eines Schadstoffmanagementsystems im Unternehmen

**Schadstoffmanagement in der
Produktion**

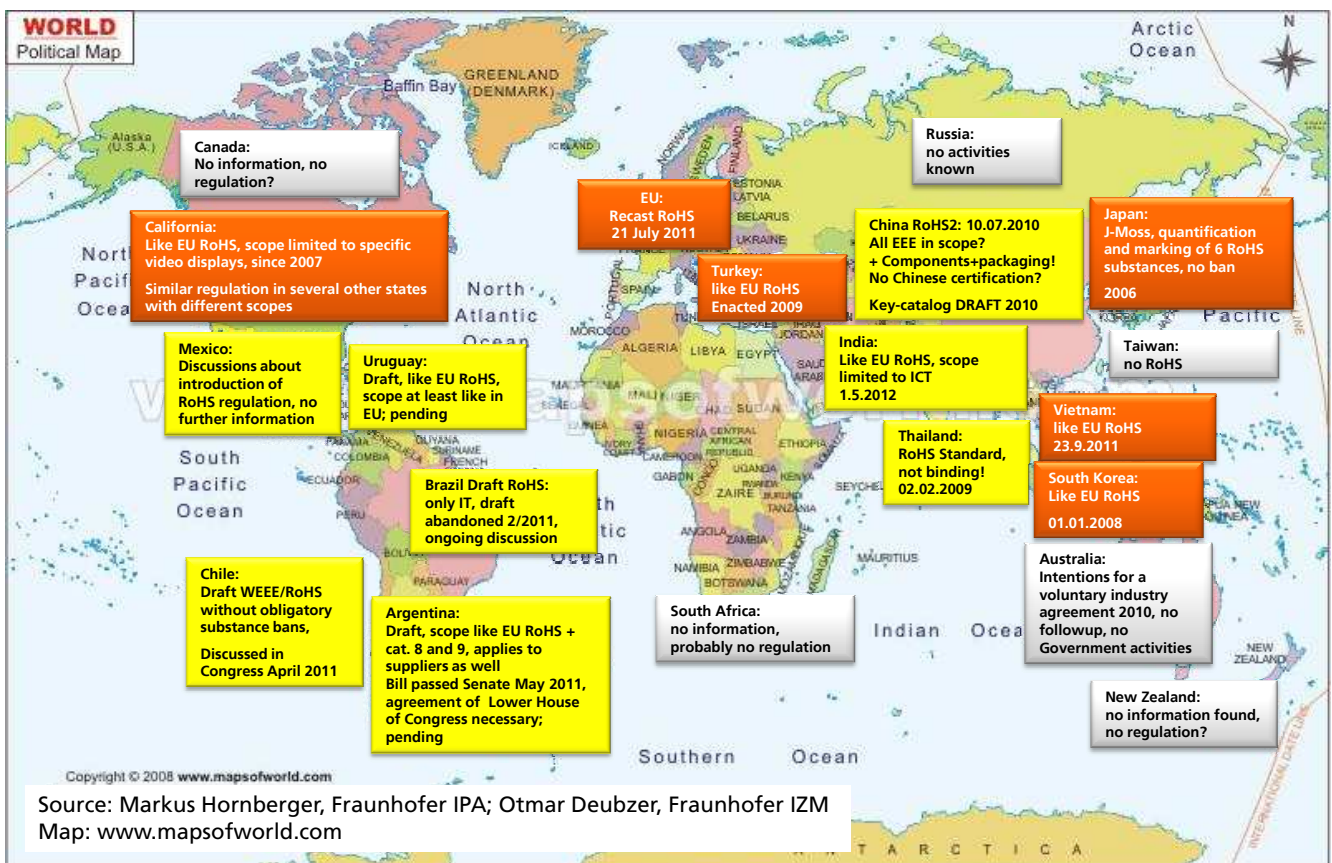
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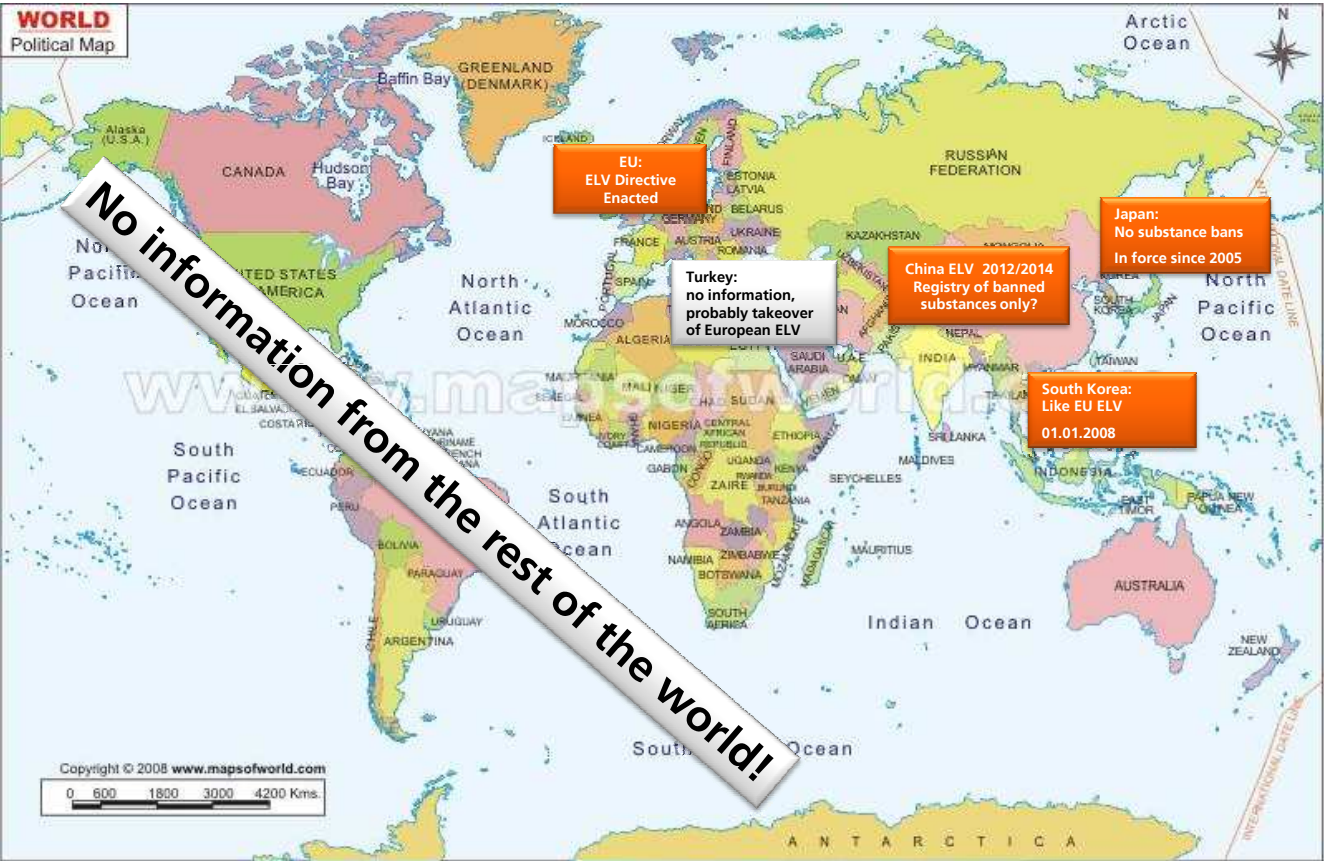
Worldwide RoHS-type Regulations (November 2011)



Worldwide RoHS-type Regulations (November 2011)



ELV-type Regulations Worldwide



Weltweite Compliance-Anforderungen Sicherstellung – Überblick Umweltgesetzgebung

Land	REACH	RoHS	WEEE	Battery	ErP
EU	x	x	x	x	x
Belgien	x	x	x	x	x
Bulgarien	x	x	x	x	x
Dänemark	x	x	x	x	x
Deutschland	REACH	ElektroG	ElektroG	BattG	E bP G
England	x	x	x	x	x
Estland	x	x	x	x	x
Finnland	x	x	x	x	x
Frankreich	x	x	x	x	x
Griechenland	x	x	x	x	x
Irland	x	x	x	x	x
Italien	x	x	x	x	x
Lettland	x	x	x	x	x
Litauen	x	x	x	x	x
Luxemburg	x	x	x	x	x

Weltweite Compliance-Anforderungen

Sicherstellung – Details Umweltgesetzgebung

Parameter	Kategorie 1	Kategorie 2	Kategorie 3
PAK			
Substanz	Beispiel		
Naphthalin			
Acenaphthylen			
Acenaphthen			
Fluoren			
Phenanthren			
Anthracen			
Fluoranthren			
Pyren			
Chrysen			
Benzo(a)anthracen			
Benzo(b)fluoranthren			
Benzo(k)fluoranthren			
Benzo(a)pyren			
Indeno(1,2,3-cd)pyren			
Dibenzo(ah)anthracen			
Benzo(ghi)perylene			
Benzo(a)pyren mg/kg	nicht nachweisbar (<0,2)*		1
Summe 16 PAK (EPA) mg/kg	nicht nachweisbar (<0,2)*	10	200
1. PAK-kontaminierten Weichmacherölen in Gummi und flexiblen Kunststoffen (Weichkunststoffen)			
2. PAK-kontaminiertem Ruß als Schwarzpigment in Gummi und Kunststoffen			
3. PAK-kontaminierten Lacken			
4. Naphthalin als Transport- oder Lagerkonservierung			
	siehe Tabelle		

PAK-Kontaminationen waren bisher nicht nur in Gummi, sondern auch in verschiedenen Kunststoffarten, wie z. B. ABS, PP und verschiedenen Lacken/Beschichtungen und in Naturmaterialien (Konservierungsmittel für Pinselborsten, Leder, Holz, usw. ...) nachweisbar.

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Weltweite Compliance-Anforderungen

EU (RoHS1.0, RoHS2.0, und REACH)

RoHS

Stoffbeschränkungen RoHS 1.0 und 2.0

- Ab dem **1. Juli 2006 / 2. Januar 2013** dürfen neu in Verkehr gebrachte Elektro- und Elektronikgeräte einschließlich Kabeln und Ersatzteilen für die Reparatur, die Wiederverwendung, die Aktualisierung von Funktionen oder die Erweiterung des Leistungsvermögens kein Blei (Pb), Quecksilber (Hg), Cadmium (Cd), sechswertiges Chrom (Cr6+), polybromiertes Biphenyl (PBB) bzw. polybromierten Diphenylether (PBDE) enthalten.
- **Der Konzentrationshöchstwert in homogenen Werkstoffen (geänd. Def.)**
 - für Blei, Quecksilber, sechswertiges Chrom, polybromiertes Biphenyl und polybromierten Diphenylether beträgt < 0,1 %,
 - für Cadmium < 0,01 %.

Blei	0,1 %	} jeweils Gewichtsprozent bezogen auf homogene Werkstoffe
Quecksilber	0,1 %	
Cadmium	0,01 %	
Sechswertiges Chrom	0,1 %	
Polybromierte Biphenyle (PBB)	0,1 %	
Polybromierte Diphenylether (PBDE)	0,1 %	

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Weltweite Compliance-Anforderungen

EU (RoHS1.0, RoHS2.0, und REACH)

RoHS - Stoffbeschränkung

Stoffbeschränkungen RoHS 1.0 und 2.0

■ Ausnahmen (ausgenommene Verwendungen)

- RoHS 1.0 und RoHS 2.0 (Annex III) umfasst 39 konkrete Werkstoffe und Bauteile von Elektro- und Elektronikgeräten für bestimmte Verwendungen, die für einen festgelegten Zeitraum von der Richtlinie ausgenommen sind
- Nur RoHS 2.0 (Annex IV) umfasst 20 Ausnahmen in Bezug auf medizinische Geräte und Überwachungs- und Kontrollinstrumente

Von der Beschränkung des Artikels 4 Absatz 1 ausgenommene Verwendungen

Ausnahme		Anwendungsbereich und Gültigkeitsdaten
1.	Quecksilber in einseitig gesockelten (Kompakt-) Leuchtstofflampen, die folgende Werte (je Brennstelle) nicht übersteigen:	
1a.	Für allgemeine Beleuchtungszwecke < 30 W: 5 mg	Läuft am 31. Dezember 2011 ab; nach dem 31. Dezember 2011 dürfen bis zum 31. Dezember 2012 3,5 mg je Brennstelle verwendet werden; nach dem 31. Dezember 2012

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RoHS: Weltweite Compliance-Anforderungen

EU (RoHS1.0, RoHS2.0, und REACH)

RoHS - Gegenüberstellung RoHS1.0 und RoHS2.0 (1/2)

	RoHS-I	RoHS-II
RoHS gilt	seit 1. Juli 2006 für • Haushaltsgroßgeräte • Haushaltskleingeräte • IT- und Telekommunikationsgeräte • Geräte der Unterhaltungselektronik • Beleuchtungskörper (einschließlich Glühlampen und Leuchten in Haushalten) • Elektrische und elektronische Werkzeuge (mit Ausnahme ortsfester industrieller Großwerkzeuge) • Spielzeug sowie Sport- und Freizeitgeräte • Automatische Ausgabegeräte	seit 1. Juli 2006 für • Haushaltsgroßgeräte • Haushaltskleingeräte • IT- und Telekommunikationsgeräte • Geräte der Unterhaltungselektronik • Beleuchtungskörper • Elektrische und elektronische Werkzeuge • Spielzeug sowie Sport- und Freizeitgeräte • Automatische Ausgabegeräte ab 22. Juli 2014 auch für: • Medizinische Geräte • Überwachungs- und Kontrollinstrumente ab 22. Juli 2016 auch für: • In-vitro-Diagnostika ab 22. Juli 2017 auch für: • Überwachungs- und Kontrollinstrumente in der Industrie ab 22. Juli 2019 auch für: • Sonstige Elektro- und Elektronikgeräte, die keiner der bereits genannten Kategorien zuzuordnen sind

Quelle:
IHK,
RoHSII-
Merkblatt,
2011

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RoHS: Weltweite Compliance-Anforderungen

EU (RoHS1.0, RoHS2.0, und REACH)

RoHS - Gegenüberstellung RoHS1.0 und RoHS2.0 (1/2)

	RoHS-I	RoHS-II
von RoHS generell ausgenommen	• militärische und sicherheitsrelevante Geräte • Geräte, die Teil eines von RoHS ausgenommenen Gerätes sind	• militärische und sicherheitsrelevante Geräte • Geräte für den Einsatz im Weltraum • Geräte, die Teil eines von RoHS ausgenommenen Gerätes sind
von RoHS ausgenommene Gerätegruppen	• Medizinische Geräte • Überwachungs- und Kontrollgeräte • Ortsfeste industrielle Großwerkzeuge	• Ortsfeste industrielle Großwerkzeuge • Ortsfeste Großanlagen • Verkehrsmittel mit Ausnahme von nicht typgenehmigten Elektrobikes • Bewegliche Maschinen zur professionellen Nutzung • Aktive implantierbare medizinische Geräte • Photovoltaikmodule für PV-Anlagen • Geräte ausschließlich für Forschung und Entwicklung Beachten Sie die genauen Begriffe und Definitionen in Art. 2 Abs. 4 und Art. 3 der RoHS-II-Richtlinie!
Quelle: IHK, RoHSII-Merkblatt, 2011	Siehe Anhang der Richtlinie 2002/95/EG in der Fassung des Beschlusses 2010/571/EU¹ Nach jeweils 4 Jahren Überprüfung der Ausnahmen durch die Europäische Kommission	Die bisherigen Ausnahmen werden inhaltlich übernommen, sind aber künftig befristet auf max. 5 Jahre bzw. 7 Jahre. Unternehmen können einen Antrag auf Verlängerung einer Ausnahme oder auf die Gewährung neuer Ausnahmen stellen.

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Weltweite Compliance-Anforderungen

EU (RoHS1.0, RoHS2.0, und REACH)

REACH - Aktionsfeld unter REACH

REACH Art. 33 - SVHC	REACH- Anhang XIV	REACH – Anhang XVII	REACH - Registrierung
Informationen in der Lieferkette: Weitergabe von Informationen über die Verwendung von SVHC (Push-Prinzip)	Stoffe die einer Zulassungspflicht (Autorisierung) unterliegen	Stoffe die einer Beschränkung (Verbot / Maximalkonzentration) für bestimmte Anwendungen unterliegen	Kritisch: Produkte die von nicht europäischen Lieferanten bezogen werden, z.B. aus der Schweiz
- Liste mit Stoffen, die als „substances of very high concern“ identifiziert wurden - Derzeit umfasst die Kandidatenliste 53 Stoffe	Achtung: Seit 17.02.2011 sind 6 SVHC-Stoffe im Anhang XIV ausgewiesen (darunter DEHP)	- Derzeit sind für 59 (57) Stoffe Beschränkungen ausgestellt - Die Werte haben als Bezugsgröße den einzelnen Stoff, nicht das gesamte Erzeugnis!	Unkritisch: Produkte die von europäischen Lieferanten bezogen werden

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Weltweite Compliance-Anforderungen

EU (RoHS1.0, RoHS2.0, und REACH)

REACH – SVHC, Anhang XIV und Anhang XVII

SVHC-Kandidatenliste

- Rechtlich bedeutet die Aufnahme von Stoffen in die Kandidatenliste kein Verbot,
- **diese Stoffe in Erzeugnissen zu verwenden, führt jedoch in der Praxis zur Forderung der Substitution dieser Stoffe**

Beschränkung – Anhang XVII

- die Beschränkung einer Verwendung eines Stoffes kann auch Erzeugnisse (Produkte) umfassen
- sieht kein Verfahren für Ausnahmeanträge der Industrie vor gilt gleichermaßen für in der EU hergestellte Erzeugnisse und für Importerzeugnisse

Zulassung – Anhang XIV

- Zulassungspflicht bedeutet, dass ein Stoff ohne eine auf Antrag erteilte Zulassung in der EU nicht verwendet werden darf
- die Zulassungspflicht gilt nur für das Inverkehrbringen bzw. die Verwendung (auf den Markt bringen) dieser Stoffen in der EU
- Erzeugnisse, die außerhalb der EU hergestellt werden und diesen Stoff enthalten fallen nicht unter die Zulassungspflicht und können ohne Zulassung in die EU importiert werden

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Schadstoffmanagement in der Produktion

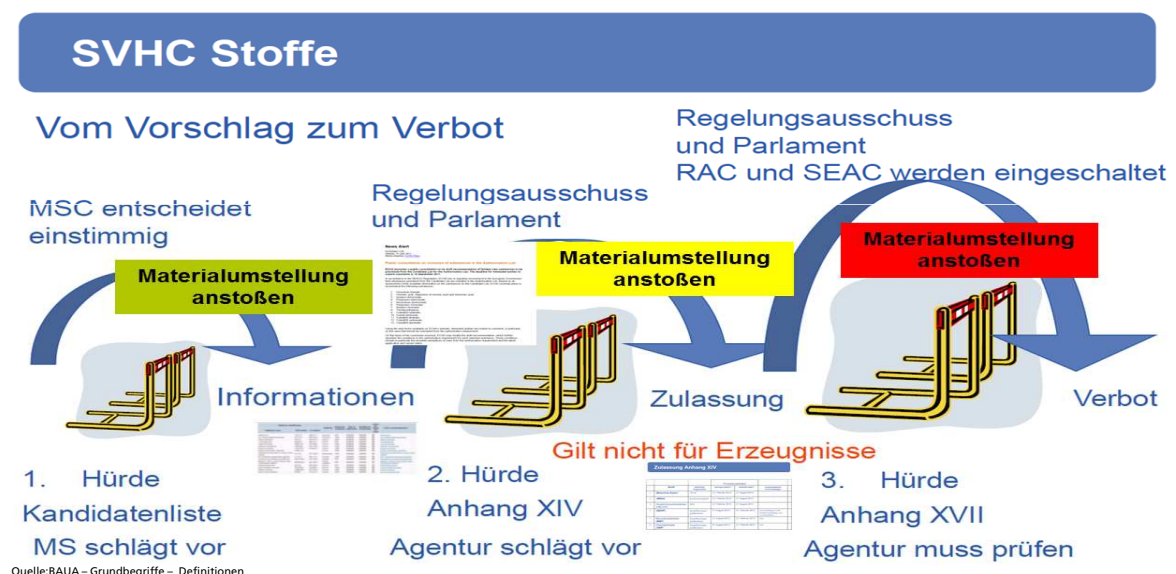
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Weltweite Compliance-Anforderungen

EU (RoHS1.0, RoHS2.0, und REACH)

REACH – Vom SVHC über Zulassung zur Beschränkung



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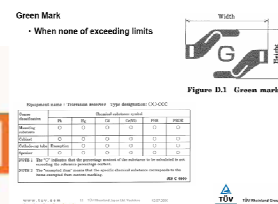
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Weltweite Compliance-Anforderungen

EU ähnliche Gesetzgebung (Japan, Türkei, Kalifornien)

Japan: J-Moss

- Zu den RoHS 6 Stoffen müssen **seit 01.07.2006** Informationen bereitgestellt werden
- **Umfasst** : Computer, Fernseher, Kühlschränke, Waschmaschinen, Trockner, Mikrowellen und Klimaanlage
- **Stoffe**: Wie EU-RoHS (Cd, Pb, Cr 6+, Hg, PBB, PBDE)
- **Grenzwerte**: Wie EU-RoHS
- **Kennzeichnung**: Ja, **Produktkennzeichnung in JAPAN – JIS C0950** falls einer der Grenzwerte überschritten
- **Gesetzesstatus**: In Kraft



Weltweite Compliance-Anforderungen

EU ähnliche Gesetzgebung (Japan, Türkei, Kalifornien)

Türkei: Turkey RoHS Law

Annex-2
Exemptions from Section A of the 1st clause of the 5th Article for the Lead (Pb), Mercury (Hg), Cr6+, PBB, PBDE and Cadmium (Cd) Levels

A. Maximal acceptable concentration levels of Lead (Pb), mercury (Hg), Cr6+, biphenyls with polibromide (pbb) and biphenyl ethers with polibromide and cadmium (Cd) in a homogeneous substance.

Substance	Amount (As the weight in a homogeneous material)
Mercury (Hg)	0.01
Cr6+	0.01
Biphenyl with polibromide (PBB)	0.01
Biphenyl ether with polibromide	0.01
Lead (Pb)	0.01
Cadmium (Cd)	0.01

30 NİS 2008 FRIDAY Official Newspaper Number: 28861

REGULATION

From the Ministry of Environment and Forestry:

Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment

SECTION ONE

Aim, Scope, Support, Definitions and Shortening

Aim

ARTICLE 1 (1) The purpose of this regulation is to protect the environment and human health through the restriction of the use of some harmful materials within electrical and electronic goods, determination of applications which will be exempt from this limitation, establishment of administrative, legal and technical principles that are related to the controlled migration of electrical and electronic goods, and setting the fundamentals and principles of recycling electronic and electrical goods in an environment.

Scope

ARTICLE 2 (1) This regulation covers electronic and electrical goods, electrical lamps and other lighting equipment to be used at home that are grouped under the classes 1, 2, 3, 4, 5, 6, 7 and 10 that are given in Annex-1A.

(2) Spare parts to be used for maintenance services and products with military applications, which were placed in the market before the effective date of this regulation, are not subject to it.

(3) Batteries and accumulators that are placed in electronic and electrical goods are subject to the regulation on the control of the waste battery and accumulators dated 31.05.2004.

Weltweite Compliance-Anforderungen

EU ähnliche Gesetzgebung (Japan, Türkei, Kalifornien)

USA – Kalifornien (California-RoHS) - Überblick

Gesetzesstatus: In Kraft seit 1.1.2007 und folgende Geräte:

- Cathode ray tube containing devices (CRT devices)
- Cathode ray tubes (CRTs)
- Computer monitors containing cathode ray tubes
- Laptop computers with liquid crystal display (LCD)
- LCD containing desktop
- Televisions containing cathode ray tubes
- Televisions containing liquid crystal display (LCD) screens
- Plasma televisions (Bildschirmdiagonale ≥ 4 inch)

<u>Restricted Substances</u>	<u>RoHS Limits</u>
Lead	1000 ppm
Hex. Chromium	1000 ppm
Mercury	1000 ppm
Cadmium	100 ppm

Stoffe: hexavalentes Chrom, Blei, Quecksilber, Cadmium (Cd, PB, Cr 6+, Hg)

Grenzwerte: wie bei Eu-RoHS

Ausnahmen: wie bei EU-RoHS

Kennzeichnung: Nein

- Jährlich muss ein **Bericht an die CIWMB** über die Benutzung der beschränkten Stoffe in den gelisteten Produkten angefertigt werden.

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Weltweite Compliance-Anforderungen

China RoHS 2.0



China RoHS 2.0 (proposed 16. Juli 2010)

- The **current scope of "Electronic Information Products"** is replaced by **"Electronic and Electrical Products"**.
 - "Electronic and electrical products" refers to equipment and their accessory products using direct current (DC) (< 1500 V) or alternating current (AC) (< 1000 V) as power sources.
- **MIIT will have to revise the list of impacted products to be sure, but this appears to move the scope in the direction of consistency with the European Union's RoHS directive.**
 - This is something to provide comments and requests for clarification to MIIT on; they have been less than interested in wanting to appear to simply follow the EU
 - In addition this would seem to drive some product categories (like LSITs - large-scale industrial tools - including some semiconductor manufacturing equipment) out of the scope of the law.

Quelle:

<https://www-12.compliance2product.com> 18

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Weltweite Compliance-Anforderungen

China RoHS 2.0



China RoHS 2.0 - Products requiring Voluntary RoHS Certification

- Following the issuance of **the Implementation Rules of Voluntary Certification on the Pollution Control of Electronic Information Products on 26 July 2011**, the **Certification and Accreditation Administration of China and the Ministry of Industry and Information Technology** has issued the **Circular on the List of Electronic Information Products requiring Voluntary Certification (First Batch) and (Exemptions) on 25 August 2011**.
- The Circular of 25 August 2011 includes detailed lists of electronic information products, peripherals, parts and components, and materials requiring voluntary RoHS certification.
- Also the list of exemptions from voluntary RoHS certification is included.

Quelle:

Young & Global Partners, 2011 19

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Weltweite Compliance-Anforderungen

China RoHS 2.0



China RoHS 2.0 Products requiring Voluntary RoHS Certification

- Pursuant to the Circular on the List of Electronic *Information* Products requiring Voluntary Certification (First Batch) of 25 August 2011, the following products, peripherals, parts and components, and materials are subject to the voluntary RoHS certification.
 - **1. Electronic information products**
computer equipment, household electronics, telecommunication equipment
 - **2. Peripherals**
mouse, keyboard, hard disk, CD-ROM, memory, sound card, graphic card, external power supply, etc.; remote control, tuner, backlight, PCBA, etc.; print head, toner, etc.; adapter or charger, LCD module, RF module, optical photographing module, etc.

Quelle:

Young & Global Partners, 2011 20

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Weltweite Compliance-Anforderungen

China RoHS 2.0



China RoHS 2.0 Products requiring Voluntary RoHS Certification

- Pursuant to the **Circular on the List of Electronic Information Products requiring Voluntary Certification (First Batch) of 25 August 2011**, the following products, peripherals, parts and components, and materials are subject to the voluntary RoHS certification.
- **3. Parts and components**
capacitor, resistor, connector, switch, plug & socket, sensor, oscillator, circulator, speaker, headset, printed circuit board, ceramic; parts, plastic parts, wire and cable, fiber optic cable, PDP, LCD, CRT, LED, semiconductor transistor, battery, CD, etc.
- **4. Electronic materials**
insulation boards, nickel-based alloy, liquid crystal, semiconductor packaging materials, solder, flame retardant, coating materials, ceramic s, glass, etc

Quelle: Young & Global Partners, 2011 21

Weltweite Compliance-Anforderungen

China RoHS 2.0



China RoHS 2.0 Products requiring Voluntary RoHS Certification

Following the issuance of the Implementation Rules of Voluntary Certification on the Voluntary China RoHS Certification Rules

- On 26 July 2011, the Implementation Rules of Voluntary Certification on the Pollution Control of Electronic Information Products were issued by the Certification and Accreditation Administration of China.
- The Implementation Rules of 26 July 2011 stipulate all details on coverage of products, types of certification, certification procedure, basic requirement for certification, voluntary RoHS certificate, and certification fees. **The Implementation Rules of 26 July 2011 will enter into force on 1 November 2011.**
- Amongst others, the Implementation Rules of 26 July 2011 are applicable to products, peripherals, parts and components, and materials included in the List of Electronic Information Products requiring Voluntary Certification of Pollution Control.

Quelle: Young & Global Partners, 2011 22

Weltweite Compliance-Anforderungen

China RoHS 2.0



China RoHS 2.0 Products requiring Voluntary RoHS Certification

Following the issuance of the Implementation Rules of Voluntary Certification on the Voluntary China RoHS Certification Rules

The Implementation Rules of 26 July 2011 contain the following details:

- Coverage of products;
- Types of certification;
- Certification procedures;
- Certification requirements;
- RoHS Certificate;
- Voluntary Product Certification Mark;
- Certification fee.

Quelle:
Young & Global Partners, 2011 23

Weltweite Compliance-Anforderungen

China WEEE (in force)



Key-Catalogue fore China- WEEE

■ Inkraft-
treten am
01.01.2011

FIRST PRODUCT CATALOGUE OF CHINA WEEE PUBLISHED

China government published the [Management of Recycling and Disposal of Waste Electrical and Electronic Products](#) (so-called "China WEEE") in 2009. As a complementary of this regulation, [the first product catalogue of China WEEE](#) was officially published at Sep 8th, 2010. Five types of products are included in this catalogue, which are television, refrigerator, washing machine, air conditioner, and computer.

These five types of products (television, refrigerator, washing machine, air conditioner, and computer) will be the first batch product to obey China WEEE. Producer and importers of these products will have relative duties from January 1st 2011, including:

- Pay fee to set up the national fund of collecting and treating waste electrical and electronic product.
- Design environmental-friendly product and try to use material without hazardous substance.
- Inform consumer about the hazardous substances potentially existent in products, and mark collection and treatment information in product or in users manuals.

As indicated by government, these products are determined to be the first batch of products for China WEEE. Considering their quantity in market is high, influence to environment of wrong treatment is huge, and social effect of setting up waste treatment system is significant. Setting up a waste treating (i.e. recycling, waste assembling scheme etc) system for these products will be the first step. More products may be included in China WEEE system in the future based on the experience coming from the first product batch in order to enhance environment protection in China.

SGS, the world's leading third party for testing, has established procedures to cover a large variety of legal requirements related to your products and is committed to informing you about developments concerning hazardous substances in Electrical & Electronic products as a complementary service. Through our global network of laboratories, we are able to provide services including analytical testing and consultancy work for technical and non-technical parameters in a comprehensive range of E&E products and consumer products in the chemical field worldwide. Please do not hesitate to contact us for further information.

Annex I:

Waste electrical and electronic products processing directory (first batch)

Number	Product Category	Product Scope
1	Television	CRT (black and white, colorful) television, PDP television, LCD television, rear-projection television and other terminal device which receives signal then converts the signal into image associated with sound.
2	Refrigerator	Refrigerator – freezer (cabinet), freezer, refrigerator and other insulated containers with cooling system which consumes energy in order to gain cooling capacity.
3	Washing Machine	Impeller washing machine, drum type washing machine, agitator type washing machine, spin dryers and other appliances which wash clothes (including drying function) through mechanical action.
4	Room Air-conditioner	Unit air conditioner (window type and through-the-wall type), split air conditioner (split wall-mounted style, separated floor standing style), multi-split air conditioner and other room air conditioner with cooling capacity not exceeding 14000W.
5	Microcomputer	Desktop microcomputer (including host, separate or integrated monitor, keyboard, mouse), portable microcomputer (including PDA) and other information processing entity.

Note: The HS Code which applies to the exported or imported electrical and electronic products listed in the catalogue will be published separately by National Development and Reform Commission together with General Administration of customs and Ministry of Environmental Protection.

Quelle:
SGS SAFEGUARDS electronical & electronics, no. 111/30. October 2011

Weltweite Compliance-Anforderungen

China ELV (pending ????) - Draft August 2010 oder 2012 (???)



DRAFT – China ELV => news???

restricted substances

tolerated maximum

■ mein Ex (Chef) bat mich um Infos. Das ist mein letzter Stand:

I think the news "ban of Chromium VI according to China ELV with BEGINNING OF 2012 (1.1.2012) for cars" is not true. It is from the draft of China ELV 2010, which not officially published yet. In this draft, it defines that the new car shall meet the requirement, chromium VI less than 100ppm.

■ Currently, I got news that China ELV shall be published in year 2012. And the ban of Chromium VI shall start year 2013.

gelistet	(PBB)
■ Für alle Fahrzeuge mit Typprüfung ab 2010	Polybrominated Diphenyl Ether (PBDE)
■ Für alle anderen Fahrzeuge im Markt (inkl. Ersatzteile) ab 2014	0.1% by weight
■ "Repair as produced"-Prinzip für Ersatzteile ist bis 2014 zulässig	
	Material and component Label
	Range and exemption term of adoption clause
	EU ELV Expiry date
	used as an alloying element
	1. Final Polymeric products (plastic resins, elastomers, etc.)
	2. Mechanical processing used (metal products)
	MS (s) PBDE source: PBDEs

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RoHS/WEEE: Weltweite Compliance-Anforderungen

Korea RoHS/ELV

Süd-Korea-RoHS – Overview

Scope:

- Personal computers (incl. monitor & keyboard)
- Audio (excluding portable devices)
- Mobile phones (incl. battery & charger)
- Printers (incl. toner & cartridge)
- Photocopiers (incl. toner & cartridge)
- Facsimiles (incl. toner & cartridge)

The Korean RoHS bans the same hazardous substances as the EU RoHS and also includes the same exceptions. It's based on a self-declaration system, with no special mark needed and does not apply to parts manufactured before 2008 and Research & Development samples.

KOREAN RoHS UPDATE ON IMPLEMENTATION

Korean RoHS has several differences compared to the European version, the main one being that it also includes the ELV and WEEE laws.



Gesetzesstatus:
Inkrafttreten
1.01.2008

(Continued from Page 1)

SELF REPORTING PRINCIPLE

All manufacturers and importers in the fields of electrical & electronics and automobiles, need to fill in bulletins with recycling characteristics of their products on the ECOAS (<http://www.ecoas.or.kr>) home page or can directly inform ENVICO (Korea Environment & Resources Corporation).

- Personal computers (incl. monitor & keyboard)
- Audio (excluding portable devices)
- Mobile phones (incl. battery & charger)
- Printers (incl. toner & cartridge)
- Photocopiers (incl. toner & cartridge)
- Facsimiles (incl. toner & cartridge)

The Korean RoHS bans the same hazardous substances as the EU RoHS and also includes the same exceptions. It's based on a self-declaration system, with no special mark needed and does not apply to parts manufactured before 2008 and Research & Development samples.

The Korean government expects the regulation to influence manufacturers to consider environmentally friendly designs for their goods and to improve the cooperation between manufacturers and recyclers.

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Weltweite Compliance-Anforderungen

Korea RoHS/ELV

Süd-Korea-RoHS – New Status Quo 2010

Änderung

Korean Act on the Resource Recycling of Electrical and Electronic Equipment and Vehicles (Korea RoHS) in 2007

-Substance restrictions (RoHS) & Recycling (WEEE)

References:

- 2007 Act on the Resource Recycling of EEE and Vehicles (Korea RoHS)
- Enforcement Reg. for the Resource Recycling of EE Products and Automobiles & Decree

Scope:

- Take back, Recycling, Disposal, Reporting, Restriction of haz. Substances
- Same substances & concentrations as EU RoHS
- 10 products impacted: TV, Refrigerators, washing machines, air conditioners, personal computers, audio, cell phones, printers, copiers, fax.
- Reduction & location of haz. substances, self declaration
- WEEE collection, dismantling instructions, recycling rates, plans to gov't, reporting.

Timing: Jan 1, 2008, compliance July 1, 2009

2007 MOE Interpretation...Medical Devices Out of Scope

- Korean MOE.... determined "combined products (eg. healthcare equipment containing several electronic products)... clearly excluded from act & regulations."
- May 4, 10 Among the products manufactured or imported in the medical purpose, items targeted by Korean legislation should comply with the regulation including the restriction of hazardous substances...plans to suspend the restriction on the use of hazardous substances in medical devices temporarily, considering time to prepare for responding to Korea Act.
- May 24, 10 Korea has decided to set the suspension period at the level of one year.

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Weltweite Compliance-Anforderungen

Korea RoHS/ELV

Süd-Korea-RoHS – New Status Quo 2010

Geänderte Rechtslage durch Auslegung in dem zuständigen Ministerium

New Position from MOE...On site inspections 2H'09

Ministry of Environment (MOE) **change of position...computers, printers, and monitors (as well as other electrical and electronic devices) that are not themselves medical devices, are within the scope of the law and regulations.**

If ship separately...in scope. Examples, printers, monitors, computers, keyboards

Korea government site audits of Korea Medical Device manufacturers in 2Q'09 for RoHS compliance.

- Requested all products imported after July 1, 2008...for HS codes for printers, computers, monitors, keyboards & RoHS declaration forms for each (including spare pts).

Action to demonstrate compliance:

- List of Products imported since July 1, 2009 by March 1, 2010.
- Completion of documentation for Korea Compliance, Nov 2010.

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Weltweite Compliance-Anforderungen

Korea RoHS/ELV

Süd-Korea-RoHS – New Status Quo 2011 to WTO (22.08.11)

Neuer Entwurf

WORLD TRADE ORGANIZATION

Committee on Technical Barriers to Trade

G/TBT/N/KOR/;
22 August 2011

(11-4169)

Original: English

NOTIFICATION

The following notification is being circulated in accordance with Article 10.6

1.	Notifying Member: <u>REPUBLIC OF KOREA</u> If applicable, name of local government involved (Article 3.2 and 7.2):
2.	Agency responsible: Resource Recycling Division, Ministry of Environment Name and address (including telephone and fax numbers, email and addresses, if available) of agency or authority designated to handle c regarding the notification shall be indicated if different from above: 1, Joongang-dong Gwacheon-si, Gyeonggi-do 427-729, Republic of Korea Tel.: (+82) 2 2110 6953 Fax: (+82) 2 504 9289 E-mail: nungchoi@korea.kr Website: http://www.me.go.kr
3.	Notified under Article 2.9.2 [X], 2.10.1 [], 5.6.2 [], 5.7.1 [], other:

4.	Products covered (HS or CCCN where applicable, otherwise national tariff heading. ICS numbers may be provided in addition, where applicable): Electrical/Electronic Products, Automobiles
5.	Title, number of pages and language(s) of the notified document: Revision of The Act for Resource Recycling of Electrical/Electronic Products and Automobiles (available in Korean).
6.	Description of content: - Enforcement notice and/or administrative measure taken if the amount of hazardous substances subjects (6 types) in electrical and electronic equipment vehicles exceeds the content standard. - Mandatory report on performance of improvement recommendation of materials and structure. - Change of the recycling target management system of electrical and electronic equipment (kilograms per population) - Clarify the recycling dues from manufacturers/importers of automobiles
7.	Objective and rationale, including the nature of urgent problems where applicable: To enhance recycling and reduce environmental risks from electrical/electronic products and automobiles.

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Weltweite Compliance-Anforderungen

Indian Regulation on Electrical a. Electronic Equipment



INDIAN REGULATION on Electrical and Electronic Equipment.

- On 1 May 2011 the amended draft document on WEEE and RoHS in India was promulgated as the "e-Waste (Management and Handling) Rules 2011" by the Indian Government in New Delhi, and which will **come into effect on 1 May 2012**.
- These Rules will apply to all those in the chain of supply and usage, from producers to dismantlers of EEE.
- As had been expected, there is a **considerable similarity with the EU WEEE and RoHS legislation**.
- It is understood that this legislation is being promoted by Non Governmental Organizations and a few manufacturers who have "green policies" that already restrict most of the substances mentioned.

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Weltweite Compliance-Anforderungen

Indian Regulation on Electrical a. Electronic Equipment



Reduction in the use of HAZARDOUS SUBSTANCES (RoHS)

- Every producer of electrical and electronic equipment listed in Schedule I shall ensure that new electrical and electronic equipment does not contain
 - **Lead, Mercury, Cadmium, Hexavalent Chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE):**
 - Provided that a maximum concentration value of 0.1% by weight in homogenous materials for lead, mercury, hexavalent chromium, polybrominated biphenyls or polybrominated diphenyl ethers and of 0.01% by weight in homogenous materials for cadmium shall be permitted.
- Reduction in the use of **HAZARDOUS SUBSTANCES (RoHS)** in the manufacture of Electrical and Electronic Equipment.
- As with the EU RoHS Directive, there are **39 exemptions on substance uses** listed in Schedule II, however these do differ in that in some of them the applicable dates or levels are not defined as they are in the EU list.

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Weltweite Compliance-Anforderungen

Indian Regulation on Electrical a. Electronic Equipment



Reduction in the use of HAZARDOUS SUBSTANCES (RoHS)

- The proposals would require manufacturers and importers to supply only "RoHS compliant" products,
 - **to provide written documentation with regard to compliance and to include detail on these substances in the product information booklet.**
 - Such reduction in use of hazardous substances in manufactured or imported electrical and electronic Equipment shall be achieved within a period of two years from the date of commencement of this rule

Quelle:
SGS SAFEGUARDS electronical & electronics, no. 148/11. August 2011

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SCHEDULE I : CATEGORIES OF ELECTRICAL AND ELECTRONIC EQUIPMENT COVERED UNDER THE RULES

SR. NO.	CATEGORIES OF ELECTRICAL AND ELECTRONIC EQUIPMENT
I	INFORMATION TECHNOLOGY AND TELECOMMUNICATION EQUIPMENT
	Centralised data processing:
	Mainframes, Minicomputers
	Personal computing:
	Personal Computers (CPU with input and output devices)
	Laptop (CPU with input and output devices)
	Notebook, Notepad etc.,
	Printers including cartridges
	Copying equipment
	Electrical and electronic typewriters
	User terminals and systems
	Facsimile
	Telex
	Telephones
	Pay telephones
	Cordless telephones
	Cellular telephones
	Answering systems
II	CONSUMER ELECTRICAL AND ELECTRONICS:
	Television sets (including sets based on LCD & LED), Refrigerator, Washing Machine, Air-conditioners excluding centralized air conditioning plants.

Weltweite Compliance-Anforderungen

Indian Regulation on Electrical a. Electronic Equipment



Responsibilities of producers with regard to e-waste (WEEE)

- In short producers of electric and electronic equipment as listed below **shall be responsible for the collection of e-waste generated during the production and recycling, collection of e-waste** from the 'end-of-life' of their product,
 - **setting up collection centers, financing and organizing a system** to cover the cost of the e-waste collection management,
 - **providing contact details to consumers to simplify e-waste return,**
 - **create awareness of eventual hazard during use or disposal** (including affixing a crossed out wheeled litter bin mark).
- **Besides responsibility of manufacturing industry the Indian regulation does also address the responsibilities of the dismantling and recycling industry**

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Weltweite Compliance-Anforderungen

USA/Kanada

USA

- **Im Moment keine Bundesgesetzgebung zu RoHS**
- **RoHS-Entwurf von 2009 wurde nicht weiterverfolgt**
- **Einige Bundesstaaten haben EU-RoHS ähnliche Gesetzgebungen:**
 - Kalifornien
 - Minnesota
 - New Jersey
 - Weitere Staaten haben nur einzelne RoHS-Substanzen reglementiert, vor allem DecaBDE

U.S. and Canada RoHS Product Content Restrictions			
State or Province	RoHS Rules in Effect	E-Waste Study	RoHS Product Content Restrictions
U.S. Government	Pending	Yes	PBDE/BDE Ban Lead Ban in Toys
California	Yes More Pending	No	Electronic Products (1/1/07) Cell Phones PBDE/BDE Ban Hg Relays/Switches PBDE Ban (1/1/08) Hg Content
Connecticut	Yes More Pending	No	PBDE Ban (1/1/08) Hg Content
Florida	Yes More Pending	No	Batteries Containing Hg
Hawaii	Yes More Pending	Yes	PBDE/BDE Ban (1/1/08)
Illinois	Yes More Pending	Yes	PBUL/BUL Ban (1/1/06) Hg Content
Maine	Yes	No	PBDE/BDE Ban (1/1/06)
Maryland	Yes	Yes	PBDE/BDE Ban (10/1/08)
Massachusetts	Pending	No	Hg Content
Michigan	Yes More Pending	Yes	PBDE/BDE Ban (6/1/06)
Minnesota	Yes More Pending	No	PBDE/BDE Ban (1/1/06)
Montana	Pending	No	PBDE Ban
New Hampshire	Yes More Pending	Yes	Hg Products (1/1/07)
New Jersey	Pending	No	Electronic Equipment
New York	Yes More Pending	Yes	PBDE/BDE Ban (1/1/06)
Ohio	Pending	No	Hg Products
Oregon	Yes More Pending	Yes	PBDE/BDE Ban (1/1/06)
Rhode Island	Yes More Pending	Yes	Hg Content (1/1/06)
Texas	Pending	No	Electronic Equipment
Vermont	Yes More Pending	Yes	Electronic Equipment Hg Products
Washington	Yes More Pending	Yes	Electronic Products (1/1/07) PBDE/BDE Ban Select Hg Products
Wisconsin	Pending	No	Electronic Products
Nova Scotia	Pending	No	Electronic Equipment

Quelle: David Kluk, Adrian de Krom
<http://www.nslanalytical.com/pdf/RoHS%20Article2.pdf>

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Weltweite Compliance-Anforderungen

USA/Kanada

USA

Significant Hazardous Substance & Energy Efficiency Legislation - in USA & Canada										Revised:	21-Jun-2011
Bill (click for more information)	Is the bill in effect?	Subject	Product Content		WEEE						
			RoHS or Energy Efficiency Restrictions	Special Labeling or Seller Notification Required	Buyers or sellers charged an E-waste Recycle Tax / Fee (starting when)	Govern. Waste Take Back Plan	Manufacturer Waste Take-back Required (starting when)	Landfill Disposal Ban (starting when)	State Procurement Depends on E-Waste Compliance		
FEDERAL											
FED	GHG reporting rule	Yes	GHG	X require large GHG emitters to report emissions							
	HR 2420	Pending	RoHS	X restricts heavy metal and flame retardant use in electrical equipment operating at 300 volts or more							
	HR 938	Pending	e-waste	X requires congressional offices to send e-waste to e-steward certified recyclers							
	HR4173	Yes	Conflict minerals	X requires SEC registered companies to annually disclose whether they have used conflict minerals (like coltran) from the Congo in their products							
	S 1680	Yes	Haz substance	X EPA to enact regs limiting formaldehyde in composite wood products (by January 2013)							
	PL 110-140	Yes	Energy efficiency	X phases out incandescent bulbs by 1/1/12							
STATE											
AR	HB1405	Pending	e-waste			X (computers, TVs, & CRTs)			X (computers, TVs, & CRTs)	X	
AZ	HB 2425	Pending	e-waste			X (computers, TVs, & CRTs)			X (computers, TVs, & CRTs)		
CA	SB20/SB50	Yes	e-waste	X TVs & CRTs >4" & laptops- 1/1/07	X TVs & CRTs >4" & laptops - 1/1/05	X TVs & CRTs >4" & laptops - 1/1/05	X	X (not mandated)	X TVs & CRTs >4" & laptops - 1/1/05	X (7/1/05)	
	CA WEEE info		e-waste								
	CA RoHS law	Yes	RoHS	X bans sale of new electronic devices w/heavy metals that exceed EU RoHS limits							
	CA RoHS info		RoHS								
	landfill ban	Yes	e-waste								
	AB2801	Yes	e-waste	X (cell phones)				X (cell phones - 7/1/06)	X fluor. lamps, thermostats, batteries, small elec.		
	AB302/2687/263	Yes	Haz substance	X (PBDE & BDE Ban-1/1/06)					X (cell phones - 7/1/06)		
	AB1125	Yes	Haz substance					X rechargeable batteries			
	AB1415 / SB423	Yes	Haz substance	X (Hg relays/switches-7/1/06)							
	CA Hg switch/relay law info		Haz substance								
	AB 32	Yes	GHG	X CARB directed to develop and implement a plan to reduce California GHG emissions to 1990 levels by 2020 (phase 1 cap and trade rules to commence 1/1/12)							
	Lighting efficiency law	Yes	Energy efficiency	X prohibits lights with > EU RoHS levels + sets light energy efficiency standards-1/1/10				X manufacturers assure take back system for lights they sell			
	AB1109	Yes	Energy efficiency	X prohibit the sale of 25 watt to 150-watt incandescent light bulbs beginning in 2012							
	AB1879 / SB509	Yes	REACH	X identify and regulate toxic chemicals of concern (California's Green Chemistry Initiative)							
Quelle: David Kluk, Adrian de Krom http://www.nslanalytical.com/pdf/RoHS%20Article2.pdf 3											

Quelle: David Kluk, Adrian de Krom
<http://www.nslanalytical.com/pdf/RoHS%20Article2.pdf> 35

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Weltweite Compliance-Anforderungen

USA/Kanada

Kanada

Significant Hazardous Substance & Energy Efficiency Legislation - in USA & Canada										Revised: 21-Jun-2011	
	Bill (click for more)	Is the bill in		Product Content	WEEE						
				RoHS or Energy Efficiency	Special Labeling or Seller Notification	Buyers or sellers charged an E-waste Recycle Tax / Fee	Govern. Waste Take Back	Manufacturer Waste Take-back Required	Landfill Disposal Ban	State Procurement Depends on E-Waste	
CANADA											
5											
6	FED	2008 PBDE Study	NA	Haz substance							
7		Energy Efficiency Act	Yes	Energy efficiency	X appliances, lights, HVAC	X appliances, lights, HVAC					
8		light bulb ban	Pending	Energy efficiency	X ban incandescent bulbs by 2012						
9	AB	AR 94/2004	Yes	e-waste		X TVs/computers/printers-ADS	X TVs/computers/printers	TVs/computers/printers			
0	BC	BC Reg 449/2004	Yes	e-waste			X computers/TVs/printers	X computers/TVs/printers			
1		info		e-waste							
2	MB	EEE Steward Reg	Pending	e-waste			X computers/TVs/printers/cell phones/VCRs/audio/fax/digital cameras				
3	NS	Sec102 Env Act	Yes	e-waste		X TVs/computers/printers EHF	X TVs/computers/printers(2/1/08) + landfill ban				
4		collection plan		e-waste			X phones/electronic games/audio equipment(2/1/09) + landfill ban				
5	ONT	Regulation 393/04	Yes	e-waste			X TV/computer/printer/fax	X TVs/computers/printers/fax (4/1/09)			
6		info		e-waste							
7	PEI	Bill 85	Pending	e-waste		X TVs/computers/printers EHF	X TVs/computers/printers + landfill ban				
8	QC	3R-V	Pending	e-waste			X computers/monitors/printers/TVs/phones/batteries/mercury lamps				
9	SE	E-10.21 Reg 4	Yes	e-waste		X computers/printers EHF	X computers/printers	X computers/printers-2/06			
0		info		e-waste		X TVs EHF	X TVs-2/07	X TVs-2/07			
1					BFR=brominated flame retardant (i.e. pentaBDE or octaBDE flame retardant)		CRT = cathode ray tubes		EHF = environmental handling fee charged		
2					Hg = mercury		PCB = printed circuit board				
3											

Quelle: David Kluk, Adrian de Krom
<http://www.nslanalytical.com/pdf/RoHS%20Article2.pdf> 36

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Weltweite Compliance-Anforderungen

Kalifornien Green Chemistry und CP 65

Proposition 65

The proposed list of c

US CALIFORNIA TO REVIEW 39 CHEMICALS FOR PROPOSITION 65 LIST

The Proposition 65 (Prop 65) refers to a list of chemicals known to the State Of California to cause cancer or reproductive harm. Prop 65 is the "Safe Drinking Water and Toxic Enforcement Act of 1986", a ballot initiative passed overwhelmingly by California residents in 1986. Since its enactment, there have been numerous lawsuits which resulted in the reduction of carcinogenic and reprotoxic chemicals through significant reformulations of consumer products containing such chemicals¹.

The proposed list of chemicals under
CIC review are:

- 
- Abacavir and its salts
 - Acetaminophen
 - Bisphenol A
 - Butyl benzyl phthalate
 - Butylated hydroxytoluene
 - C.I. disperse yellow 3
 - Chloroalkyl ethers
 - Chloropicrin
 - Clodinafop-propargyl
 - Coumarin
 - Dapsone
 - Dicloran
 - Entecavir
 - Flonicamid
 - Fluazinam
 - Hexythiazox
 - Hydralazine and its salts
 - Isophosphamide
 - Metofluthrin
 - N-nitroso-N-methylamine
 - N-methylpyrrolidone
 - 6-nitrobenzimidazole
 - Pentachloronitrobenzene
 - Pimecolimus and tacrolimus
 - Pivalolactone
 - Pyraflufen ethyl
 - Raloxifen and its salts
 - Stavudine
 - Thiophanate methyl
 - Topoisomerase II inhibitors
 - Triazole antifungal agents
 - 2,4,6-trimethylaniline and its salts
 - Tris(2-ethylhexyl) phosphate



To be con'd

- Dibenzanthracenes and dibenz[a,c]anthracene
- 3,3'-Dichlorobenzidine-based compounds metabolized to 3,3'-Dichlorobenzidine
- 2,4-Dichlorophenoxyacetic acid (2,4-D), its salts and esters
- Dinitroaniline pesticides and prodiamine and trifluralin
- Mixtures containing pentabromochlorocyclohexane
- N-methyl-N-nitroso-1-alkylamines and N-methyl-N-nitroso-1-octanamine, N-methyl-N-nitroso-1-decanamine, N-methyl-N-nitroso-1-dodecanamine, and N-methyl-N-nitroso-1-tetradecanamine

Quelle: SGS-Safeguard No 152. 11.08.20112011

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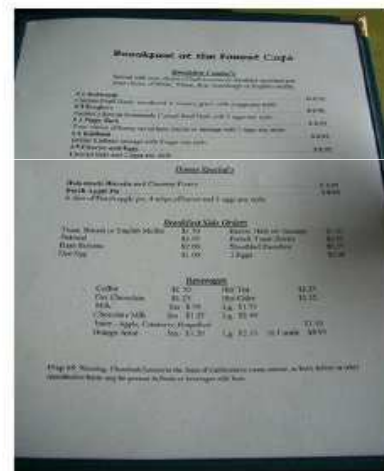


Weltweite Compliance-Anforderungen

Kalifornien Green Chemistry und CP 65

Proposition 65

- 800+ chemicals on current list
- 250 have Safe Harbor Limits
- Warning Labels
- Chemicals are listed and delisted by “state qualified experts” appointed by the Governor, OEHHA under EPA (Office of Environmental Health Hazard Assessment)
- Chemicals are known to be either carcinogens or reproductive toxins
- Grace period: 12 months



Quelle: Intertek-USA 2010

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Weltweite Compliance-Anforderungen Kalifornien Green Chemistry und CP 65 Proposition 65

Restricted Substances



- Lead and lead compounds
- Chromium and hexavalent chromium
- Arsenic
- Crystalline silica
- Tobacco smoke
- Nickel and nickel compound
- Mercury
- Formaldehyde
- Phthalates (children's products)
- Flame Retardants (children's products, home furnishings)
- Poly chloro phenols (leather based products)
- Insecticide and pesticide residue (ingredient base – example: lanoline (wool wax) used in cosmetic products)
- Cadmium



Quelle: Intertek-USA 2010

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Weltweite Compliance-Anforderungen Kalifornien Green Chemistry und CP 65 Proposition 65

- One or more listed chemicals can cause cancer or birth defect and reproductive harm
- Causing chemicals are present in the product, presumably exceeding the defined safe level
- A proposition 65 warning means one of two things:
 - the business has evaluated the exposure and has concluded that it exceeds the “no significant risk level”
 - the business has chosen to provide a warning simply based on its knowledge about the presence of a listed chemical without attempting to evaluate the exposure.

CAUTION-PROP 65 WARNING- Handling the coated electrical wires of this product may expose you to lead, a chemical known in the state of California to cause cancer, birth defects or other reproductive harm. Wash hands after use.



Quelle: Intertek-USA 2010 40

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Weltweite Compliance-Anforderungen

Asien (Thailand, Taiwan, ...)

Vietnam RoHS seit September in Kraft

- **Für Vietnam existiert eine RoHS-Gesetzgebung ähnlich der EU-RoHS Ed. 1.0**
 - September 2011 in Kraft getreten
 - Stoffbeschränkungen, Grenzwerte, Bezugswerte entsprechen Eu-RoHS
- **Betroffene Electrical and Eelectronic Equipments (Products)**
 - Large scale equipment
 - Small scale Equipment
 - Informatic and Media Equipment
 - Consumer Equipment
 - Lighting Equipment
 - Electric and Electronic tools (except for large scale or fixed equipment used in industry)
 - Entertainment, sport equipment and toys
 - Automatic measuring qquipment

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Weltweite Compliance-Anforderungen

Asien (Thailand, Taiwan, ...)

Thailand – TIS 2368-2551 (2008)

- **Thailand hat keine EU-RoHS Richtlinie, sondern den TIS 2368-2551 (2008) - Electrical and electronic equipment that may contain hazardous substances: restriction of the use of certain substances**
- **Der Thailand Industrial Standard TIS 2368-2551 ist vom Thailand Industrial Standard Institute veröffentlicht worden und am 2. Februar 2009 in Kraft getreten** (Standard regarding chemical restrictionsd for electrical asnd electronical products)
- **Der TIS 2368-2551 ist ein freiwilliger Standard:**
 - Es besteht keine Umsetzungspflicht
 - Er hat keine bindende Wirkung (nur freiwillige Basis)
 - Markt getriebener Standard
 - Produkte werden als Thai RoHS Standard konform vermarktet
 - Es gibt kein offizielles Label, aber Firmen generieren Eigen-Label (Thai RoHS konform)
- **Der Thai RoHS Standard entspricht im Anwendungsbereich Stoffbeschränkungen, Grenzwerten und Ausnahmen der EU-RoHS**

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Weltweite Compliance-Anforderungen

Asien (Thailand, Taiwan, ...)

RoHS Taiwan

- **In Taiwan existiert der Toxic Chemical Substances Control Act**
 - Mehrere Revisionen seit 2008
 - Schwerpunkt Flammschutzmittel in Elektronikprodukten
- **RoHS Service Team**
 - Die Taiwanesische Regierung hat ein EU-RoHS Service Team etabliert, um taiwanesische Firmen zu unterstützen, EU-RoHS konforme Produkte für den Export in die EU zu erzeugen
 - Aufgaben des RoHS Service Team
 - Guidance
 - Consultation and Information
 - Establishing „Green Production Chains“
 - Implementation of the Environmental Regulations

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Weltweite Compliance-Anforderungen

Asien (Thailand, Taiwan, ...)

Australien und Neuseeland

- Die Australische Regierung hat, aufbauend auf einer Umfrage unter Unternehmen, die bereits von der EU-RoHS tangiert werden oder einer Australischen Regelung betroffen wären, drei mögliche Modelle vorgestellt:
 - Kein RoHS
 - Freiwillige RoHS
 - Gesetzliche RoHS
- 74% der befragten Unternehmen gaben an, dass sie die EU-RoHS-Bestimmungen für ihre Produkte gerne auf Australien ausweiten würden.
- 53% glauben, dass Großimporteure von Elektro- und Elektronikgeräten die EU-RoHS-konformität ausweiten werden.
- 62% glauben nicht, dass Kleinimporteure dies tun werden.
- >30% meinen, man sollte in Australien eine EU-RoHS ähnliche Gesetzgebung einführen, in einer Zeitskala von 1-4 Jahren. Teilweise wird aber auch längere Vorlaufzeit gefordert.
- **Wunsch nach Übereinstimmung mit der EU-RoHS**

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Weltweite Compliance-Anforderungen

Mittel- und Südamerika (Brasilien, Argentinien, ...)

Südamerika und Karibik - LAC-Countries

Drafts für WEEE/RoHS

- Argentinien
- Brasilien
- Chile
- Uruguay

Environmental Product-Related Regulations for Electronics in LAC – RoHS(2)

Current Activity

- Combined WEEE/RoHS bills now pending in Argentina, Brazil, Uruguay. Standalone RoHS bills pending in Brazilian National Congress. Some Brazilian states now looking at RoHS issue – remember, SP WEEE law originally had RoHS element but that was line-item vetoed by governor.
- New Brazilian sustainability criteria for federal government procurement require proof of compliance with RoHS limits on Pb, Cd, Hg, Cr(VI), PBB, PBDE. States that are working on green purchasing (MG, PI, RJ, SP) may follow suit.
- Brazilian Standards body ABNT has created a study group for technical norms based on EU's WEEE and RoHS Directives.
- Linked emerging issue of laws/regulations in 4 Brazilian states (with bills with similar language pending in other states) on "artifacts" containing heavy metals.

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Vielen Dank für Ihre Aufmerksamkeit!

Fragen, Kommentare, Anregungen?

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Vorausschauendes unternehmerisches Handeln für alle
Beteiligten der Elektroindustrie und des Elektroaltgeräte-
Recyclings

