

International Maritime Organization (IMO) resolution on Inventory of Hazardous Materials on board of ships

Understand convention to reply to customers' needs

Group Environment– Sep 2015

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In this document, you will find a description of the Hong Kong International Convention for ships recycling and its accompanying Inventory of Hazardous Materials. We also explain how to find necessary information for Inventory of Hazardous Materials using available information on Schneider Electric own eco-mark= Green Premium.

Hong Kong International Convention & Inventory of Hazardous Materials (2009)

The International Maritime Organization adopted the **Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships in 2009**, which was attended by delegates from 63 countries.

The Convention is aimed at ensuring that ships, when being recycled after reaching the end of their operational lives do not pose any unnecessary risks to human health, safety and to the environment.

The Hong Kong Convention intends to **address all the issues around ship recycling**:

- Ships sold for scrapping may contain environmentally hazardous substances (asbestos, heavy metals, hydrocarbons, ozone-depleting substances and others)
- Concerns rose about the working and environmental conditions at many of the world's ship recycling locations.

What is the Inventory of Hazardous Materials?

The Guidelines on Ship Recycling also introduced the concept of an "**Inventory of Hazardous Materials**" for ships. It was envisaged that this document, **containing an inventory of all materials** used in the construction of a ship **that are potentially hazardous** to human health or the environment, **would accompany the ship throughout its working life**.

The Inventory of Hazardous Materials is organized into 3 parts. Part I (Structure and Equipment) is about shipbuilding and operating. Part II (Operative waste) and Part III (Stores) are about preparation prior to recycling.

To build an "Inventory of Hazardous Materials" document during the construction stages of a ship, Schneider Electric may have to provide **Material Declaration with an inventory of Hazardous Materials** that are included in provided products.

Requested information is:

- Provided products
- Hazardous Material from 2 tables: Table A + Table B + 2 EU specific materials
- Approximate quantity

Exemptions for inventory:

Although electrical and electronic equipment is required to be listed in the Inventory, the amount of hazardous materials potentially contained in printed wiring boards (printed circuit boards) installed in the equipment does not need to be reported in the inventory.

There is no need to list loosely fitted equipment in Part I of the Inventory and such equipment should be listed in part III.

Fixed means the conditions that equipment or materials are securely fitted with the ship, such as by welding or with bolts, riveted or cemented, and used at their position, including electrical cables and gaskets.

Loosely fitted equipment means equipment or materials present on board the ship by the conditions other than “fixed”, such as fire extinguishers, distress flares, and lifebuoys.

Batteries containing lead acid or other hazardous materials that are fixed in place should be listed in Part I of the Inventory. Batteries that are loosely fitted, including consumer batteries and batteries in stores, should be listed in Part III of the Inventory.

Entry into force of the convention

Internationally, entry into force of the convention is stated as 24 months after ratification by 15 States, representing 40 per cent of world merchant shipping by gross tonnage.

In EU, regulation 1257/2013:

- entered into force in December 2013
- for new EU flagged ships it is applicable earliest on December 2015 and latest December 2018
- for existing EU flagged ships, it is applicable at the latest on December 31, 2020
- for non-EU flagged ships, it is also applicable at the latest on December 31, 2020, if ship calls at a port or anchorage of an EU member state

Through its environmental policy, Schneider Electric helps customers in anticipating and ensuring full regulation compliance, especially regarding chemicals. Schneider Electric is already ready to support preparation of Inventory of Hazardous Materials, with use of available Declarations on [Green Premium / Check a product](#) website and statement given below in this document.

Schneider statement for hazardous materials included in Inventory of Hazardous Materials

Table A - Materials listed in appendix 1 of the convention

Schneider Electric states that substances of Table A – appendix 1 of the convention are prohibited from its products and offers for legal requirements.

Anti-fouling systems containing organotin compounds as a biocide are not present in Schneider Electric products.

	Material Name	Threshold level	Approximate quantity
Asbestos	Asbestos	0,1%	0
PCB's	Polychlorinated Biphenyls (PCBs)	50 mg/kg	0
Ozone depleting	Chlorofluorocarbons (CFC's)	No threshold level	0
	Halons	No threshold level	0
	Other fully Halogenated CFC's	No threshold level	0
	Carbon Tetrachloride	No threshold level	0
	1,1,1-Trichloroethane	No threshold level	0
	Hydrochlorofluorocarbons	No threshold level	0
	Hydrobromofluorocarbons	No threshold level	0
	Methyl Bromide	No threshold level	0
	Bromochloromethane	No threshold level	0
Anti-fouling systems containing organotin compounds as a biocide		2,500 mg total tin/kg	0

Table B - Materials listed in appendix 2 of the Annex to the Convention

Through the proactive implementation of the RoHS European Directive since many years, most of products are designed free of:

- cadmium & cadmium compounds
- hexavalent chromium and hexavalent chromium compounds
- lead and lead compounds
- mercury and mercury compounds
- polybromated biphenyl (PBB's)
- polybrominated Diphenyl Ethers (PBDE's)

Radioactive substances are prohibited from Schneider Electric products and offers for legal requirements. Listed Shortchain Chlorinated Paraffins are not present in Schneider Electric products.

Material Name	Threshold level	Approximate quantity
Cadmium & Cadmium Compounds	100 mg/kg	Refer to REACH declaration of products
Hexavalent Chromium and Hexavalent Chromium Compounds	1,000 mg/kg	Refer to RoHS declaration of products
Lead and Lead Compounds	1,000 mg/kg	Refer to RoHS declaration of products
Mercury and Mercury Compounds	1,000 mg/kg	Refer to RoHS declaration of products
Polybromated Biphenyl (PBB's)	50 mg/kg	Refer to RoHS declaration of products.(*)
Polybrominated Diphenyl Ethers (PBDE's)	1,000 mg/kg	Refer to RoHS declaration of products
Polychloronapthalenes (Cl>=3)	No thr. level	50 mg/kg
Radioactive substances	No thr. level	0
Certain Shortchain Chlorinated Paraffins	1%	0

(*) Even if the threshold is more restrictive than RoHS, a RoHS compliant product will not have PBB at all. The presence of some substances (Cadmium, lead, mercury) above the threshold is possible thanks to the use of RoHS exemptions specially in metallic alloys and electronic components.

Table C - Materials added by EU 1257/2013 regulation

Perfluorooctane sulfonic acid (PFOS) is not present in Schneider Electric products. In line with Schneider Electric EcoDesign Policy, strategy is to design products free of HBCDD included in REACH Annex XIV once its Authorization "sunset date" is passed – i.e. August 2015.

Material Name	Threshold level	Approximate quantity
Perfluorooctane sulfonic acid (PFOS)	100 mg/kg	0
Brominated Flame Retardant (HBCDD)	1,000 mg/kg	Refer to REACH declaration of products

Available information can be found using Schneider Electric website [Green Premium / Check a product](#). RoHS & REACH declarations, for one or several Schneider commercial references, can directly be obtained on the Check a product webpage.

The image shows two screenshots of the Schneider Electric Green Premium website. The top screenshot displays the 'Green Premium results' page for a product with reference DOM11604. The results are organized into a table with columns for RoHS, REACH (June 2011 candidate list), PEP, and EoLI. The RoHS column indicates 'Compliant since 0849' with a link to 'Declaration of conformity'. The REACH column shows '0 SVHC(s) above the threshold' with a link to 'SVHC content declaration'. The PEP column lists 'EINVPEP080807EN' with a link to 'Search document in download center'. The EoLI column states 'Need no specific recycling operations'. The bottom screenshot shows the 'Green Premium Check a product' interface, which includes a search form for commercial references and a 'Check a product' button.

Schneider Green Premium eco-mark

With Green Premium Schneider Electric enhances its engagement for sustainable development and is the first to provide its customers with environmental information they need.

Criteria

A Green Premium product delivers in a transparent, easily accessible and in compliance with standards and regulation:

- Declaration of compliance to requirements of the **European Directive for Restriction of Hazardous Substances (RoHS)**
- **Substances of Very High Concern (SVHC)** content as defined by **European Regulation for Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)**
- Product Environmental Profile (PEP) documentation, with all environmental impacts including carbon footprint and energy consumption, for all life cycle phases
- Recycling rate, constituent material and End of Life Instructions (EoLi) when necessary

About RoHS

The **RoHS Directive** entered in force in the European Union in summer 2006. A recast of the Directive entered into force on the 21 July 2011 (**2011/65/EU**) and repeals the RoHS Directive 2002/95/CE on the 3 January 2013.

It requires the **elimination of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB), and polybrominated diphenyl ether (PBDE) flame retardants** in certain Electrical and Electronic Equipment (primarily household and IT/technology equipments) marketed to consumers. The RoHS Directive defines the scope of application through a **list of 11 categories** of Electrical and Electronic Equipments (EEE), the 11th being "Other electrical and electronic equipment not covered by any of the other categories". However **many EEE are excluded according to** art. 2.4 of the Directive itself and some **technologies are exempted**; it means some parts are allowed to contain banned substances above the thresholds, according to art. 5.2 of the Directive itself. In order to avoid any misunderstanding, **European Industry has defined its position** in Orgalime position papers and guides.

As part of its company business strategy, Schneider Electric has a proactive commitment towards sustainable development and protection of environment. It has thus decided, for many years, a proactive implementation of the RoHS European Directive and notably **to design and produce most of its products as if they were in the scope of the RoHS Directive.**

About REACH

As per the European REACH Regulation definitions, Schneider Electric is a supplier of "Articles". Schneider Electric has decided not only to comply with EU REACH regulation, but also to implement it on a worldwide basis.

More specifically, on the chemical "Substances" and/or "Preparations" (as per the EU REACH Regulation definitions) that we are buying in our upstream supply chain:

- During 2008, Schneider Electric and its worldwide affiliates have conducted a close monitoring of the preregistration process. It consisted of making sure that the upstream suppliers of "Substances" and/or "Preparations" that are used in the manufacturing of our "Articles" had been effectively pre-registered before December 1st, 2008 with the European Chemical Agency (ECHA).
- Since 2010, within the frame of the registration process, Schneider Electric is making sure that the upstream suppliers of chemicals have effectively registered the "Substances" and/or "Preparations" which had to be registered before December 2010 & May 2013, in order to secure the respective supply chain.

On the "Articles":

- On October 2008, the European Chemical Agency issued the so-called "**Candidate List**". This list of "Substances of Very High Concern" ("SVHC") has been regularly updated since and the most up to date version can be found at ECHA website. Schneider Electric has decided to **be transparent** by providing with all the SVHC contents of our "Articles" (%w/w) available on our internet website through the '**Green Premium Check a Product**' tool accessible on <http://www.schneider-electric.com/green-premium>.
- Since 2008, Schneider Electric has undertaken the necessary steps to aim at obtaining an overall visibility on all "SVHC" that may be used in any such "Articles", by requesting the suppliers the

SVHC content from our substances, preparations and articles, as well as involving our material and product experts.

- In line with its EcoDesign Policy, Schneider Electric's strategy is **to design products free of Annex XIV substances** (list of substances subject to authorization) once their Authorization "sunset date" is passed. This allows Schneider Electric to go further on the way of "Greener" products (less Substances of Very High Concern in its products) and to maintain the respective supply chain without any risk of disruption.
- For "**Annex XVII**", (list of restricted substances for certain applications) Schneider Electric strictly respect the restrictions. The complete list of substances that are restricted under certain conditions of use can be found at the European Chemical Agency (ECHA) website: <http://echa.europa.eu/web/guest/addressing-chemicals-of-concern/restrictions/list-of-restrictions/list-of-restrictions-table> .

Contact us

To know more, use our Schneider Electric website [Green Premium/Check a Product](#).

You can freely use the contact area to raise specific questions around ship convention & Inventory of Hazardous Materials.

Date	Revision	Author	Comments
Sept 2014	1	C. Colin	First version
Sept 2015	2	P. Bardollet/ C. Colin/ S. Schwob	Update according to new IHM version from August 2015