Getting started guide of chemSHERPA®

Updated on May 09, 2022

Joint Article Management Promotion-consortium (JAMP)

Preface

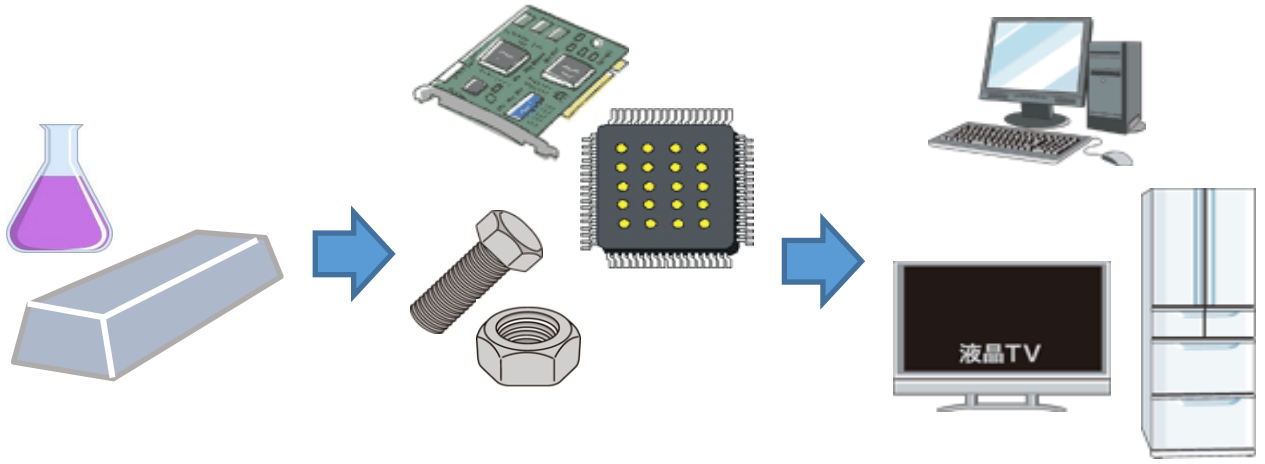
Targeted person:
People appointed duties to manage or prepare the information of the chemical substance contained in products for the first time.

The goal of this guide:
Make support to recognize the managerial importancy of the chemical substances contained in products and the communication for information required.

Contents

1. **the importancy and challenges on the management of chemicals in products**
2. **What to do as a company (Responsibility)**

1-1. Why do we need to manage chemicals?



Materials → Parts → Final products

- ✓ In the case of electrical and electronic products, final products are said to consist of about 10,000 components.
- ✓ These structural components are made of chemicals, which may include regulated chemical substances.

Final products → Proper disposal (recycle)

- ✓ Minimizes the exposure of workers when dismantling, disassembling, and reprocessing at the recycling plant after the final product is discarded.

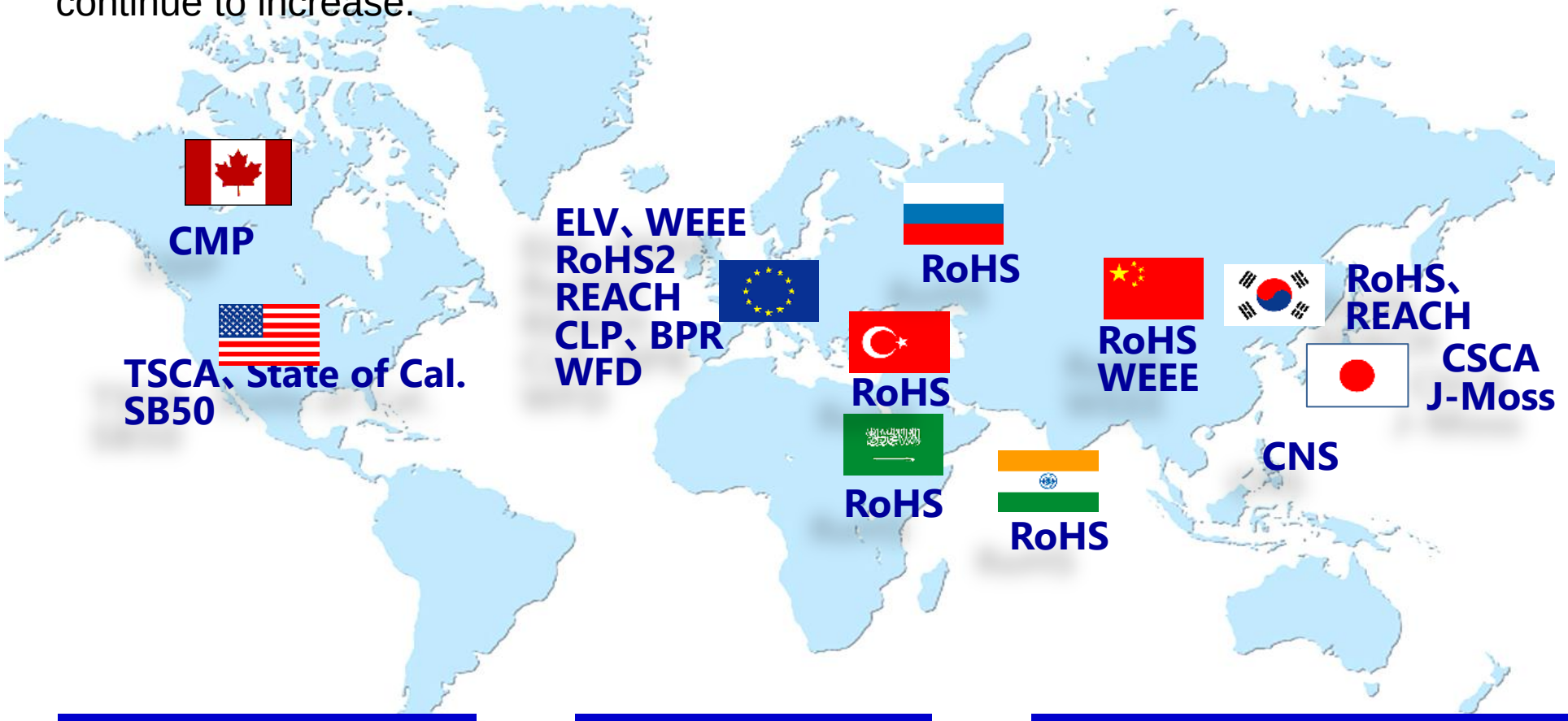
Final products → Inappropriate disposal

- ✓ Prevents environmental contamination resulting from inappropriate disposal, including illegal dumping and illegal movement of waste across national borders.

Harmful chemical substances are regulated to reduce the risk of harming persons and the environment as a result of less than optimal disposal conditions (2011/65/EU (RoHS2) preface)

1-2. Regulations requiring information management for chemicals contained in products are spreading around the world

The number of regulations requiring the management of chemicals contained in products continue to increase.



Product Recalls **Fines** **Lose Credibility**

1-3. Risks in substance management without accurate information communication

Submission of the detailed composition information may be requested by authorities, for example, about the possibility of generation/contamination of substance or mixture in a manufacturing process as well as raw material when you want to export products to EU.

Joint Article Management Promotion-consortium: pamphlet excerpt from Transferring Information on Chemicals Contained in Products

1-4. Risks in substance management with poor information communication

The non-compliance case that is thrown open to public

European Commission | Safety Gate Alerts

Alert number	A12/00219/21
Product	Headset

Risk type	Chemical Environment
	The solders in the product contain lead (measured value up to 58.4 by weight). The plastic material of the product contains an excessive amount of bis(2-ethylhexyl) phthalate (DEHP) (measured value: 0.13% by weight). Lead poses a risk to the environment. DEHP may harm the health of children, causing possible damage to their reproductive system.
	The product does not comply with the Commission Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS 2 Directive).
Category	Electrical appliances and equipment
Type	Consumer
Description	Red headphones. The product was sold online, in particular via AliExpress.
Brand	Unknown
Name	New HD Sound Wired Headphones Over Ear Headsets Bass HiFi Sound Music Stereo Earphone Flexible
Type / number of model	08-15
Weekly report number	Report-2021-7
Alert submitted by	Sweden

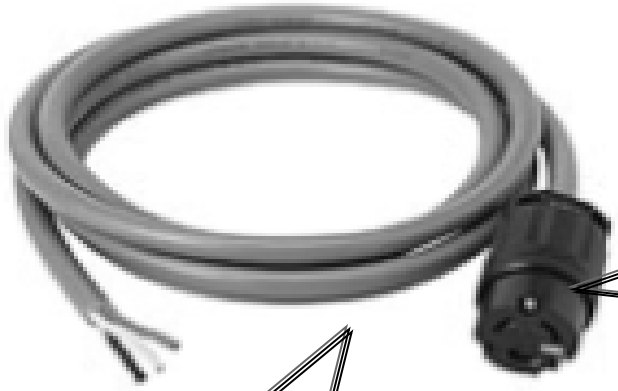
（example）Notice of EC report (RAPEX) / every week is published and required to take necessary measures

It is available from RAPEX system by a search

“European Commission - Rapid Alert System: Weekly reports”

1-5. Issues for companies transferring chemical information

Sample case: Connector with cable



Chemicals contained in the connector

1. Copper (metallic)
2. Nickel
3. Bis(2-ethylhexyl) phthalate
4. Polyvinyl chloride (PVC)

Chemicals contained in the cable

1. Copper (metallic)
2. Bis(2-ethylhexyl) phthalate
3. Polyvinyl chloride (PVC)
4. Diantimony trioxide

Structure

[1] Connector 1 piece

[2] Cable 1 cable

It is realized that even simple product is consisted of multiple materials and chemicals.

1-6. Issues for companies transferring chemical information

Acquire part and material data

Example of a cable with connector (1 m)

Can your company make a list like this on its own?

Name	Quantity	Name	Quantity	Material name	Material mass	Substance name	CAS number	Content rate	Mass	Applicable REACH item	
								(wt%)	(g)	SVHC	Controlled substance
Cable	1	Conductor	3	Copper (example: cable harness copper)	7.1	Copper (metallic)	7440-50-8	100	7.1	-	-
		Insulator	3	PVC	4.5	Bis(2-ethylhexyl) phthalate	117-81-7	12	0.54	Yes	Yes
						Polyvinyl chloride (PVC)	9002-86-2	42	1.89	-	-
		Sheath	1	PVC	24.4	Bis(2-ethylhexyl) phthalate	117-81-7	27	6.588	Yes	Yes
						Diantimony trioxide	1309-64-4	0.16	0.03904	-	-
						Polyvinyl chloride (PVC)	9002-86-2	40	9.76	-	-
Connector	1	Conductor	1	Copper alloy	10.3	Copper (metallic)	7440-50-8	70	7.21	-	-
				Nickel plating	0.01	Nickel	7440-02-0	100	0.01	-	Yes
		Insulator	1	PVC	43.6	Bis(2-ethylhexyl) phthalate	117-81-7	15.4	6.7144	Yes	Yes
						Polyvinyl chloride (PVC)	9002-86-2	54.4	23.7184	-	-

Data source: Japan Electric Cable Technology Center documentation

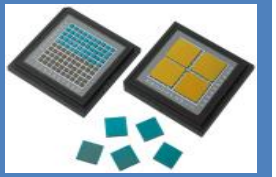
1-7. Distribute “chemical information” and “goods” as a set

Flow of goods

Materials producers

Compound (preparation) producers

What chemicals do they contain?



Part manufacturers

What chemicals do they contain?

Equipment manufacturers

Does the “information” flow in the same way as the “goods”?

The market is global

2-1. What to Do as a Company

①Appropriate and quick information gathering and offering

Trust building with the business partner

②Appropriate management of the chemical substance in products

Product offer compatible with the tightening of regulations

③The use of the common system

Harmonization ＝ Efficiency of work＝Accuracy up of work

・Available to build the trust with a customer

・Compliance of the regulation is available

2-2. The use of the common system

Harmonization ＝ Efficiency of work＝Accuracy up of work

- Common rule of information management and the communication
  Management guidelines for chemicals in products, Use rule of chemSHERPA tools
- List of chemicals in product to be managed (target of communication)
  List of substances to be managed under chemSHERPA scheme
- Minimum items and format of communication required
  chemSHERPA-CI/AI

※ chemSHERPA: Chemical information SHaring and Exchange under Reporting PArtnership in supply chain
（The scheme that METI support the development and dissemination for making use in the global communication scheme for management of chemicals in products）

＜Feature＞

- From upstream to downstream, the use by all companies concerned with the supply chain including the trading company is considered.
- The information communication based on the common view such as the data formats that adopted the international standard for chemicals is available.
- Based on “Communication criteria with the responsibility", composition information on the common substances list and also “Compliance information” on every product area for article is available.

2-3. Image of the Cross-industrial “Information Transfer Scheme for Chemicals Contained in Products (chemSHERPA)”

chemSHERPA-CI/AI
Shared formats for the industrial world reduce work burden throughout the supply chain

chemSHERPA declarable substance lists
Covers the major legal regulations around the world and contributes to legal compliance

Vehicles

Transportation rules

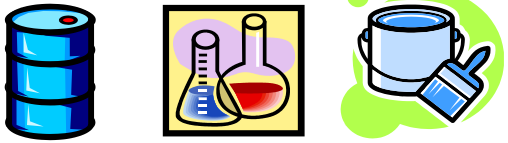
Guidelines for management of chemicals contained in products
A management mechanism essential for businesses involved in the supply chain

2-4. Basic concept of information transfer on chemicals in products

Products and information flow through the supply chains

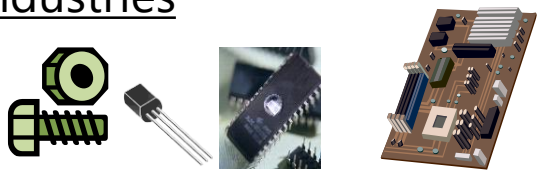
Products flow

Chemical , Material Industries



Chemicals：chemSHERPA-CI

Parts , Manufacturing Industries



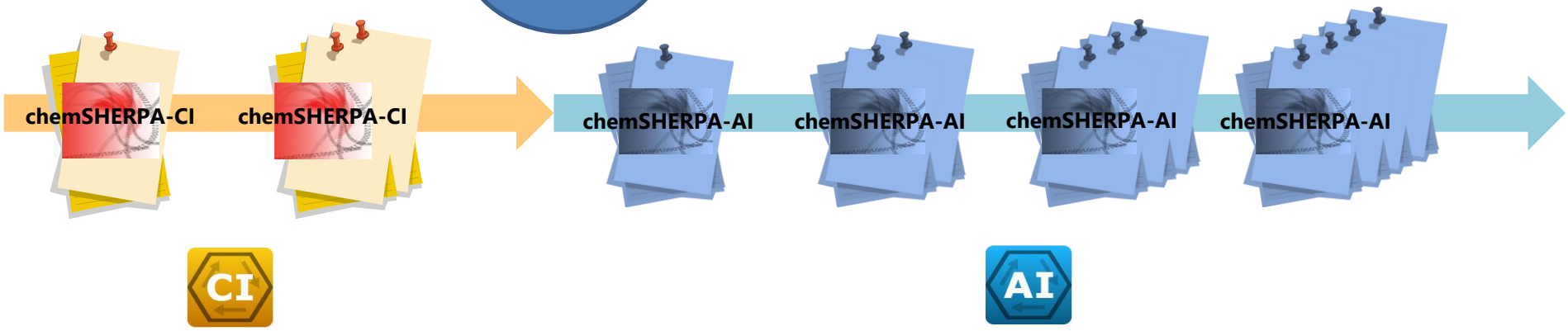
Articles：chemSHERPA-AI

Assemble, Finish goods Industries

Compositions/ Compliance information (IEC)

Chemical, Physical Changes

Information flow



Reference information

Please refer to follows to recognize chemSHERPA deeply, and to use it.

・You can access pages of the major information on chemSHERPA from the following URL.

・Attendance of chemSHERPA Basic Course is recommended for the person handling a tool for the first time. The course is held only in Japan.

- **chemSHERPA Web site（English/Chinese）**
  https://chemsherpa.net/english
- **chemSHERPA Web site（Japanese）**
  https://chemsherpa.net/
- **chemSHERPA Infromative documents**
  https://chemsherpa.net/english/docs/description
- **chemSHERPA tool to be downloaded**
  https://chemsherpa.net/english/tool
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