Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals)
Regulations 2013 [CLASS Regulations]



Chemical Management Division

Department of Occupational Safety and Health

Objective

By the end of this session, participants should be able to;

 Understand the requirements of the regulations

Presentation Scope

- Background
- Content of regulations
- Requirement of regulations
- Offences
- * ICOP

BACKGROUND

- •Classification based on EU, labelling on MS and CSDS on ILO Recommendations 177
 - •Not address information about chemical suppliers
- •Not define the scope of principal and subsidiary suppliers
- •Not address specific hazards such as reactive hazards, aspiration, narcotic effect, reproductive hazards and environmental hazards.

■Gazetted on 11th October 2013

- ■Take effect on 12th October 2013
- ■Enacted under provision of paragraph 66 (2)(a), (c), (k) and (u), OSHA 1994
- ■Regulate the supply of hazardous chemicals for use at workplace
- ■Classification based on GHS, 3rd Revised Edition 2009

CPL 1997

CLASS 2013

Guidelines on

- Classification
- Labelling
- Chemical Safety
 Data Sheet

Industry Code of Practice on Chemicals
Classification and Hazard
Communication

Content of Regulations

Arrangement of Regulations

- Divided into 7 parts 16 Regulations
- Part I: Preliminary
 - 1. Citation and commencement
 - 2. Application
 - 3. Interpretation
- Part II: Classification
 - 4. Duty of principal supplier to classify chemicals as hazardous chemicals
 - 5. Record of classification
- Part III: Packaging
 - 6. Packaging requirement of hazardous chemical
 - 7. Seal of packaging

Arrangement of Regulations

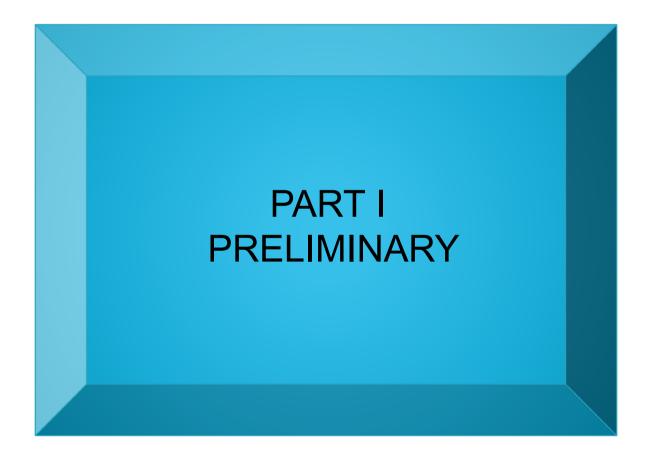
- Part IV: Labelling
 - 8. Duty to label packaging of hazardous chemical
 - 9. Requirement for hazard pictograms
 - 10. Rules of precedence for hazard pictograms and hazard statement on label
 - 11. Dimension of label
 - 12. Affixing and tagging of label
- Part V: Safety Data Sheet
 - 13. Duty to furnish Safety Data Sheet
- Part VI: Inventory of Hazardous Chemicals
 - 14. Inventory of hazardous chemicals

Arrangement of Regulations

- Part VII: Confidential Business Information
 - 15. Confidential business information on hazardous chemicals
- Part VIII: Revocation
 - 16. Revocation
- \$ 5 Schedules

List of Schedules

Schedule	Title
First	Hazard Classification, Hazard Pictogram, Signal Word and Hazard Statement
Second	Hazard Pictograms
Third	Combined Hazard Statements
Fourth	Dimension of Label
Fifth	Cut-off Value of Concentration



Application: Subregulation 2(1)

- CLASS Regulations apply to chemicals supplied for use at place of work
- Chemicals:
 - **✓** Substance
 - √ Mixture

Exemption: Subregulation 2(2)

- CLASS Regulations do not apply to:
 - **X** Radioactive material Atomic Energy Licensing Act 1984
 - Scheduled waste First Schedule, Environmental Quality (Scheduled Wastes) Regulations 2005
 - Cosmetic or product Control of Drugs and Cosmetics Regulations 1984
 - * Chemical used for R & D/ trial purposes
 - Not for sale in the market
 - Not exceeding 5 kg
 - Adequate information on the safe use of the chemical is made available

Exemption: Subregulation 2(2)

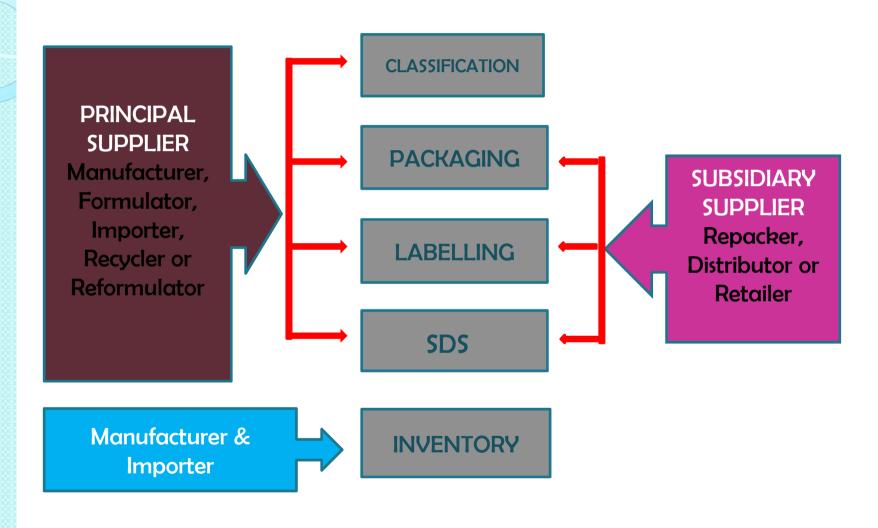
- Manufactured item, other than a fluid or particle, which;
 - ✓ Forms to a specific shape or design during manufacture;
 - ✓ Has end use function dependent in whole or in part upon its shape or design end use; and
 - ✓ Under normal conditions of use, does not release significant quantity of chemicals which poses physical hazard or risk to health

Exemption: Subregulation 2(3)

- Parts II (Classification), III (Packaging), IV (Labelling) and VI (Inventory) of CLASS Regulations do not apply to:
 - Pesticides (Pesticides Act 1974)
 - Chemical in transit prior to export which is stored at any storage area

(Note: For these chemicals only requirements on SDS and CBI (Part V & VII) apply)

Responsibilities of Supplier





Classification: Regulation 4

- Responsibility of principal supplier
- Duty to classify chemicals in accordance with:
 - ✓ Part 1 ICOP CLASS Classified chemicals list, or
 - ✓ If not listed, to use methodology specified in Part 2 ICOP CLASS
- In case of inconsistency in the classification for the same chemicals:
 - √DG may determine the classification for the chemical

Hazardous Chemicals

- Any chemicals classified in accordance to respective hazard classification listed in First Schedule
 - Physical Hazard
 - Health Hazard
 - Environmental Hazard

Hazard Classification: Physical Hazard

HAZARD CLASS

HAZARD CATEGORY

1. Explosives	Unstable explosive	Div 1.1	Div 1.2	Div 1.3	Div 1.4	Div 1.5	Div 1.6
2. Flammable gases	Cat 1	Cat 2					
3. Flammable aerosols	Cat 1	Cat 2					
4. Flammable liquids	Cat 1	Cat 2	Cat 3	Cat 4*			
5. Flammable solids	Cat 1	Cat 2					
6. Oxidizing gases	Cat 1		-	_			
7. Oxidizing liquids	Cat 1	Cat 2	Cat 3				
8. Oxidizing solids	Cat 1	Cat 2	Cat 3				
9. Gases under pressure	Compresse d gas	Liquefied gas	Refrigerate d gas	Dissolved gas			
10. Self-reactive chemicals	Type A	Type B	Type C	Type D	Type E	Type F	Type G
11. Pyrophoric liquids	Cat 1						
12. Pyrophoric solids	Cat 1						
13. Self-heating chemicals	Cat 1	Cat 2					
14. Chemicals which, in contact with water, emit flammable gases	Cat 1	Cat 2	Cat 3				
15. Organic peroxides	Type A	Type B	Type C	Type D	Type E	Type F	Type G
16. Corrosive to metals	Cat 1						
		1					

^{*}not included in CLASS Regulations

Hazard Classification: Health Hazard

HAZARD CLASS

HAZARD CATEGORY

Cat 1	Cat 2	Cat 3	Cat 4	Cat 5*
Cat 1	Cat 2	Cat 3	Cat 4	Cat 5*
Cat 1	Cat 2	Cat 3	Cat 4	Cat 5*
Cat	Cat 1A/1B/1C (1)		Cat 2	Cat 3*
Cat 1	Cat 2			
Cat 1				
Cat 1			_	
Cat 1A/1B (1)		Cat 2		
Cat 1A	Cat 1A/1B (1)			
Cat 1A/1B (1)		Cat 2	Effect on or via lactation	
Cat 1	Cat 2	Cat 3		
Cat 1	Cat 2		•	
Cat 1	Cat 2*			
	Cat 1 Cat 1 Cat 1 Cat 1 Cat 1 Cat 1 Cat 1A Cat 1A Cat 1A Cat 1 Cat 1	Cat 1	Cat 1	Cat 1



Hazard Classification: Environmental Hazard

HAZARD CLASS

HAZARD CATEGORY

1. Hazardous to aquatic environment – acute hazard	Cat 1	Cat 2*	Cat 3*	
2. Hazardous to aquatic environment — chronic hazard	Cat 1	Cat 2	Cat 3	Cat 4
3. Hazardous to the ozone layer	Cat 1			



Records of classification: Regulation 5

- Duty of principal supplier:
 - √ record the classification of chemicals
 - √ format of record Part 2 of the ICOP
 - √ maintain record and made available for inspection



Packaging: Regulation 6

- Duty of supplier to ensure packaging of hazardous chemical:
 - √ designed and constructed that its content cannot escape
 - √ packaging and fastening are strong and able to retain its content
 - ✓ packaging and fastening materials are not susceptible to adverse attack by the content or form harmful/dangerous compound with its content
 - ✓ if fitted with replaceable fastening device, the packaging can be repeatedly fastened without the contents escaping

Seal of Packaging: Regulation 7

Initially be closed with a seal in such a way that once the packaging is opened, the seal is broken and could not be repaired







Labelling: Subregulation 8 (1)

- Responsibility of supplier principal & subsidiary supplier
- Duty to ensure every packaging of hazardous chemicals is labelled legibly and indelibly with:
 - ✓ Product identifier
 - √ Supplier identification
 - √ Signal word
 - √ Hazard statement
 - √ Hazard pictogram
 - ✓ Precautionary statement

Labelling Requirements: Subregulation 8(2)

- ❖If the container ≤125 ml, supplier may label with:
 - ✓ Product identifier
 - √ Supplier identification
 - √ Signal word
 - √ Hazard pictogram (if applicable)
 - √ "read SDS before use"

Labelling Requirements: Subregulation 8(3) & 8(4)

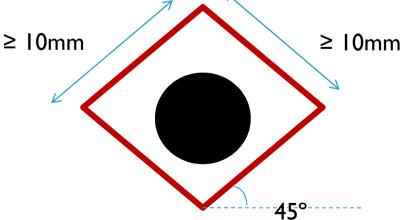
- Information in accordance with hazard classification, hazard pictogram, signal word & hazard statement as specified in First Schedule
- Subregulation 8(1) & 8(2) shall be in accordance with Part 3 of the ICOP; and
- Information is supplied in national language and English language
- If the signal word "Danger" is used, the signal word "Warning" must not be used

Labelling Requirements: Subregulation 8(5) - 8(7)

- If classified within several hazard classes, all hazard statements should appear on the label unless there is evidence of duplication/ redundancy
- Where applicable, combined hazard statement, specified in Third Schedule shall be used
- Label should be updated within 3 months if there is any changes resulting in a more severe classification

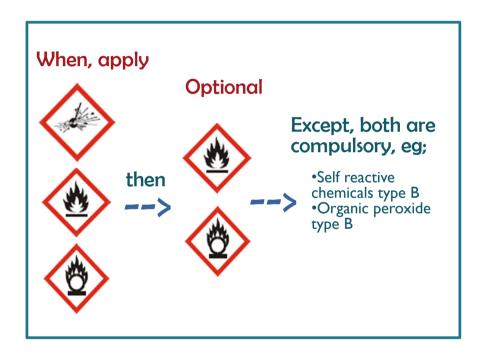
Labelling: Regulation 9

- Hazard pictogram
 - √Black symbol, white background and red border
 - ✓In diamond shape with sides tilted at 45 degrees to horizontal
 - √1/15th of area of label but not less than 100mm²



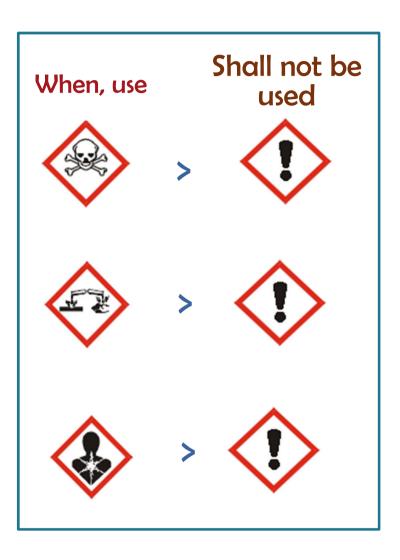
Labelling: Regulation 10

- The following rules of precedence for hazard pictograms & hazard statements on label applies:
 - > For physical hazards-
 - If the 'exploding bomb' symbol, 'flame' symbol and 'flame over circle' symbol applies, the use of the 'flame' symbol and 'flame over circle' symbol shall be optional, except where
 - both hazard pictograms are compulsory, for example:
 - √ Self reactive chemicals type B
 - ✓Organic peroxide type
 B



Labelling: Regulation 10

- For health hazard:
- ✓ If the "skull and crossbones" pictogram is used, the hazard pictogram of "exclamation mark" shall not be used;
- ✓ If the "corrosion" pictogram is used, the hazard pictogram of "exclamation mark" shall not be used for skin or eye irritation;
- ✓ If the pictogram of "health hazard" is used for respiratory sensitization, the hazard pictogram of "exclamation mark" shall not be used for skin sensitization or for skin or eye irritation;



Precedence for the allocation of hazard statements

- If the classification of a chemical as a hazardous chemical would cause the use of more than one hazard statement on a label, the following rules of precedence shall apply:
 - ✓If hazard statement, H410 "Very toxic to aquatic life with long lasting effects" is assigned, the statement, H400 "Very toxic to aquatic life" shall not appear on the label;
 - √The hazard statement H314 "Causes severe skin burns and eye damage" is assigned, the statement H318 "Causes serious eye damage" shall not appear on the label.

Hazard pictograms

Physical Hazard		Health	Hazard	Environmental Hazard		
Description of symbol	Hazard pictogram	Description of symbol	Hazard pictogram	Description of symbol	Hazard pictogram	
Flame		Skull and crossbones		Environment	¥2	
Flame over circle		Exclamation mark		Exclamation mark		
Exploding bomb		Health hazard				
Gas cylinder		Corrosion				
Corrosion						

Dimension of label: Regulation 11 Fourth Schedule

Capacity of package	Dimension of label (in mm)			
Not exceeding 3 litres	At least 52 x 74			
Greater than 3 litres but not exceeding 50 litres	At least 74 x 105			
Greater than 50 litres but not exceeding 500 litres	At least 105 x 148			
Greater than 500 litres	At least 148 x 210			

Affixing and tagging of label: Regulation 12 (1),(2) & (3)

If packaging is a container or contains another container:

Label shall be firmly affixed to ≥ 1 surfaces of the packaging so that label can be read horizontally when the package is set down in its normal position.

- ❖ If the container ≤125 ml, the label shall be affixed in such manner deemed reasonable by the supplier
- When it is not practicable to label a hazardous chemical in view of the nature of the container, it shall be tagged with the label.



Safety Data Sheets (SDS): Regulation 13 (1)

- Duty of supplier to furnish updated SDS to chemical recipient for:
 - √each hazardous chemical supplied
 - √any mixture containing hazardous
 substances at concentration exceeding cutoff value specified in Fifth Schedule

Fifth Schedule: Cut-off value

Hazard Class	Cut-off Value
Acute toxicity	at 1.0% or more (≥ 1.0%)
Skin corrosion or irritation	at 1.0% or more (≥ 1.0%)
Serious eye damage or eye irritation	at 1.0% or more (≥ 1.0%)
Respiratory sensitization	at 0.1% or more (≥ 0.1%)
Skin sensitization	at 0.1% or more (≥ 0.1%)
Germ cell mutagenicity (Category 1)	at 0.1% or more (≥ 0.1%)
Germ cell mutagenicity (Category 2)	at 1.0% or more (≥ 1.0%)
Carcinogenic	at 0.1% or more (≥ 0.1%)
Reproductive toxicity	at 0.1% or more (≥ 0.1%)
Specific target organ toxicity - single exposure	at 1.0% or more (≥ 1.0%)
Specific target organ toxicity - repeated exposure	at 1.0% or more (≥ 1.0%)
Aspiration hazard	at 10.0% or more (≥ 10.0%)
Hazardous to the aquatic environment	at 1.0% or more (> 1.0%)

Contain information according to the following headings and order:

Safety Data Sheets (SDS): Regulation 13 (2)

- Identification of the hazardous chemical and supplier
- 2. Hazard identification
- 3. Composition and information of the ingredients of hazardous chemical
- 4. First aid measures
- 5. Fire fighting measures
- 6. Accidental release measures
- 7. Handling and storage
- 8. Exposure controls and personal protection

- 9. Physical and chemical properties
- 10. Stability and reactivity
- 11. Toxicological information
- 12. Ecological information
- 13. Disposal information
- 14. Transportation information
- 15. Regulatory information
- 16. Other information

Safety Data Sheets (SDS): Regulation 13 (3)

- The information in SDS shall be in accordance with the minimum requirement of SDS as specified in Part 3 of the ICOP
- The SDS should be written in both national language and English

Revision of SDS: Subregulation 13(4)

- Revise SDS if:
 - new information on the hazardous chemical
 - more than 5 years have elapsed since last date of preparation/revision
 - directed by officer
- Revised SDS shall be furnished as soon as practicable



Duty to prepare and submit inventory: Subreg. 14(1) & (2)

- Duty of importer and manufacturer
- Prepare an inventory of hazardous chemical imported/supplied
 - quantity 1 metric tonne and above per year
 - each calendar year
- Submit an inventory to DG not later than 31st March of the following year

Information in the inventory: Subreg. 14(3), (4) & (5)

- Inventory contain information on:
 - ☑ Product identifier
 - Name of the hazardous chemical
 - Composition and ingredients of hazardous chemical
 - Hazard classification
 - Total quantity supplied/imported
- Name and ingredient of hazardous chemical shall include CAS no., if applicable
- Inventory should be maintained in a good condition and orderly manner
- Chemicals Information Management System (CIMS)

PART VII: CONFIDENTIAL BUSINESS INFORMATION (CBI)

CBI on hazardous chemical: Subreg. 15(1) & (2)

CBI only limited to:

- name of hazardous chemical
- composition and ingredients of hazardous chemical
- The information can be omitted and replaced with:

name of chemical



*generic name of chemical

ingredients concentration



*concentration range

*Refer to ICOP CLASS

Disclosure of CBI: Subreg. 14(3), (4) & (5)

- Information to be disclosed to:
 - **☑** DG
 - **☑** OHD
 - Person who uses or handles hazardous chemical

provided that:

- > request in writting
- information used for the protection of the safety and health of employees



Revocation: Reg. 16

CPL Regulations 1997 P.U.(A) 143/1997] are revoked

Offences

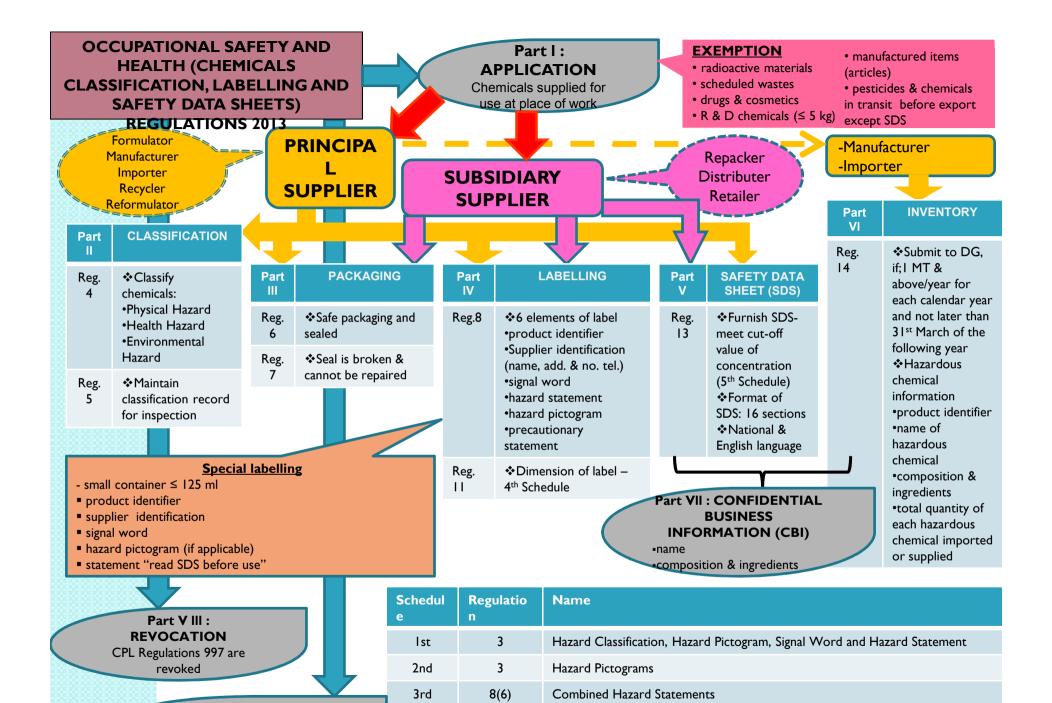
Person	Subreg.	Requirement;
Principal supplier	4(1), (2), (4)	Classification
Principal supplier	5(1), 5(2)	Classification record
Supplier	6(1)	Packaging
Supplier	7(1)	Seal of packaging
Supplier	8(1), (2), (3), (4), (5), (6), (7)	Labelling of packaging
Supplier	9(1)	Requirement on hazard pictogram
Supplier	10(1), (2)	Precedence for hazard pictogram & hazard statement

Offences (cont...)

Person	\$ubreg.	Requirement;
Supplier	11(1)	Dimension of label
Supplier	12(1), (2), (3)	Affixing & tagging of label
Supplier	13(1)	Furnishing SDS
Supplier	13 (2), (3)	Content of SDS
Supplier	13 (4), (5)	Revision of SDS
Importer/ Manufacturer	14(1), (2), (3), (4)	Preparation, submission, content and maintenance of inventory
Person	15(6)	Misuse of CBI

Reference Documents

- Industry Code of Practice on Chemical Classification and Hazard Communication – ICOP CLASS
- Globally Harmonized System of Classification and Labelling of Chemicals (Purple book- 3rd Revised Edition 2009)
- UN Recommendations on the Transport of Dangerous Goods- Model Regulations (Orange Book-16th Revision 2009)



П

13

4th

5th

Dimension of Label

Cut-Off Value of Concentration

SCHEDULE

Thank you