

危害性化學品標示及通識規則

Regulation of Labelling and Hazard Communication of Hazardous Chemicals

英文版本內容僅提供參考，仍應以公告中文法規內容為主。

The English version is for your general reference. In case of discrepancy, the original version in Chinese shall prevail.

Chapter 1 General Provisions

Article 1 These Regulations have been enacted in accordance with the provisions of Article 10 Paragraph 3 of the Occupational Safety and Health Act (referred to as the "Act" hereunder).

Article 2 The hazardous chemicals designated in the Act (referred to as the "hazardous chemicals") shall refer to the following dangerous and harmful materials:

1. Dangerous material: means any chemical that complies with and possesses physical hazards as specified in National Standards CNS 15030 Classification.
2. Harmful material: means any chemical that complies with and possesses health hazards as specified in National Standards CNS 15030 Classification.

Article 3 Terminology used in these Regulations:

1. Manufactured article: means a manufactured item formed to a specific shape or design during manufacture, and the final use of which is entirely or partially determined by the specified shape or design, and during normal usage, will not release hazardous chemicals.
2. Container: means any bag, cartridge, bottle, box, can, barrel, reactor, storage tank, piping system or any other container that can hold hazardous chemicals, but it does not include engines, fuel tanks or other operation system in a transportation vehicle.
3. Manufacturer: means the enterprise that manufactures hazardous chemicals for wholesale, retail, process, or use.
4. Importer: means the enterprise that imports hazardous chemicals from abroad.
5. Supplier: means the enterprise that wholesales or retails hazardous chemicals.

Article 4 The provision of these regulations does not apply to:

1. Hazardous industrial waste.
2. Tobacco or tobacco products.
3. Food, beverages, drugs, cosmetics.
4. Manufactured article

5. General domestic consumer products not for industrial uses.
6. Fire extinguishers.
7. Intermediate products undergoing chemical reactions in reactors or processes.
8. Others designated by the Competent Authority of Central Government.

Chapter 2 Labelling

Article 5 Employer shall conspicuously label the following items on those containers containing hazardous chemicals in accordance with the classification and hazard pictograms prescribed by Attachment 1, and with the format of Attachment 2 that shows the labels with following items, using Chinese characters as standard, and if necessary, foreign languages that workers understand as supplement:

1. Hazard Pictograms
2. Content including:
 - (1) Name.
 - (2) Hazardous ingredients.
 - (3) Signal Word.
 - (4) Hazard Statements
 - (5) Precautionary Statements
 - (6) Name, address, and telephone number of manufacturer, importer or supplier.

If the hazardous chemicals inside the containers indicated above are mixtures, the hazardous ingredients that should be indicated on the labels are the hazardous chemicals within the mixture, which possess physical hazard or health hazard as specified in National Standards CNS 15030 Classification.

If the hazardous chemicals cannot be classified in accordance with the Attachment 1, the container that shall be labelled as prescribed in Paragraph 1 may only be labelled with the information specified in Item 2 of Paragraph 1.

If the volume of the container is 100ml or less, the container that shall be labelled as prescribed in Paragraph 1 may only be labelled with the name, hazard pictograms, and signal word.

Article 6 For mixtures as prescribed in Paragraph 2 of the preceding Article, the Employer shall label the container based on the hazardous properties after mixing. The hazardous properties as defined in the preceding paragraph are determined as follows:

1. If a mixture has been tested as a whole, the results shall be used.
2. For a mixture that has not been tested as a whole, health hazards of the mixture shall

be assessed using scientific data in accordance with the standards for classifying mixtures set out by National Standards CNS 15030 Classification, unless there are supported scientific proofs available. The physical hazards of flammable, explosive, and reactive properties shall be evaluated using scientifically valid data.

Article 7 The shape of the hazard pictograms as part of the label prescribed in article 5 is a 45 degrees vertical square, and it must be sized so that it can be clearly recognized. The symbols should be in black with white background, and the red frame of the symbol shall be wide enough to have sufficient warning effect.

Article 8 Employer may not need to label one of the following containers containing hazardous chemicals:

1. Inner container inside a labelled external one and is served as internal lining that will not be taken out.
2. External container with a labelled inner container and the label is visible from outside.
3. Portable container with its hazardous chemicals transferred from labeled containers by a worker and only used immediately by the same worker during the shift.
4. Hazardous chemicals transferred from labelled containers only for the identified laboratory use to conduct experiments or research.

Article 9 For one of the following containers containing hazardous chemicals, the employer may install a placard labelling items specified in Paragraph 1 of article 5 in an obvious location instead of labelling the containers. For a piping system, however, labelling may be substituted by hanging an application plate or by painting the pipelines with specified identification color or symbols:

1. Several containers which contain the same type of hazardous chemicals and are stored in the same location.
2. Ducting or piping systems.
3. Chemical equipment such as reactor, distillation tower, absorption tower, extractor, blender, precipitator, heat exchanger, measuring tank, or storage tank.
4. Equipment such as cooling devices, stirring devices, or compression devices.
5. Conveying apparatus.

For containers installing the placard with information specified in Items 2 through 5 of the preceding paragraph, if the name, address, and telephone number of the manufacturer, importer, or supplier may change frequently but the Safety Data Sheet (SDS) is available, the information required under Item 2 (6), Paragraph 1 of article 5 may be exempted.

Article 10 When transporting containers containing hazardous chemicals within the work site, the employer does not need to duplicate the labelling prescribed in Attachment 1 for containers that have already been labelled in accordance with related transportation laws and regulations. The containers must be labelled in accordance with these regulations while workers are engaging in operations involving loading, unloading, transporting, handling, or utilization of hazardous chemicals.

Article 11 Manufacturers, importers, or suppliers shall label the containers prior to providing an enterprise or self-employed individuals with hazardous chemicals.

Article 5 to 9 shall apply, mutatis mutandis, to the previous paragraph.

Chapter 3 Safety Data Sheet, Inventory, Disclosure, and Communication Measures

Article 12 For individual chemicals containing hazardous chemicals or meet the concentration limits specified in Attachment 3, an employer shall provide to workers a Safety Data Sheet (SDS) in accordance with Attachment 4.

The Safety Data Sheet (SDS) referred to the previous paragraph shall be in Chinese as standard, and if necessary, foreign languages that workers understand as supplement.

Article 13 The manufacturer, importer or supplier shall provide enterprises or self-employed individuals with a Safety Data Sheet before supplying the chemicals as prescribed in the preceding Article. If the chemicals are mixtures containing two or more hazardous ingredients, the Safety Data Sheet (SDS) shall be prepared based on the hazardous properties after mixing.

For the chemicals prescribed in the previous paragraph, hazardous ingredients shall be listed by their chemical name; and the methods of hazard classification of mixtures are as follows:

1. If a mixture has been tested as a whole, the results shall be used.
2. For a mixture that has not been tested as a whole, health hazard of the mixture shall be assessed using scientific data in accordance with the standards for classifying mixtures set out by National Standards CNS 15030 Classification, unless there are supported scientific proofs available; and the physical hazards of flammable, explosive, and reactive properties shall be evaluated using scientifically valid data.

Article 14 When several mixtures indicated in the preceding article are in the same group of chemicals with different concentrations, but the same hazardous components, usage, and hazardous classifications, the same Safety Data Sheet (SDS) may be used, but the different names of the chemicals should be clearly noted.

Article 15 A manufacturer, importer, supplier, or employer shall check the accuracy of a Safety

Data Sheet (SDS) based on the actual circumstances and update it as needed. A Safety Data Sheet shall be reviewed at least every three years.

Records of Safety Data Sheet updates in the preceding paragraph, such as content, date, and version revision, shall be kept for three years.

Article 16 After a vehicle carrying hazardous chemicals enters a working site, an designated trained personnel shall confirm that the chemicals are labelled and Safety Data Sheets (SDS) are available in accordance with these regulations before loading, unloading, moving, handling or using the chemicals.

The applicable training indicated in the preceding paragraph includes general health and safety training for manufacturing, handling, or using of hazardous chemicals, as well as applicable curricula for specialized training of dangerous goods transport personnel designated by the Central Government Transportation Competent Authority.

Article 17 In order to ensure that workers have accurate information about hazardous chemicals and thereby prevent occupational disasters, the employer shall adopt the following mandatory measures:

1. Designate a hazard communication plan based on actual circumstances; review and update promptly, and implement correctly according to the plan. The record of implementation shall be kept for three years.
2. Prepare an inventory of hazardous chemicals. The content and format shall refer to Attachment 5.
3. Place Safety Data Sheet(s) of hazardous chemicals at an easily accessible location at the work site.
4. Provide education and training to workers on the manufacturing, handling, or usage of hazardous chemicals. The curriculum content and hours of education and training shall be administered in accordance with the Occupational Safety and Health Education and Training Regulations.
5. Any other measures needed to ensure the accuracy of hazardous chemicals information been provided to workers.

The hazard communication plan prescribed in Item 1 of the preceding paragraph shall include plan, administration, record, and correcting measures for necessary items such as the inventory of hazardous chemicals, Safety Data Sheet(s), labelling, and education and training on hazard communication.

Article 18 The manufacture, importer, or supplier that withholds from disclosure of the name, concentration, or manufacturer, importer as well as supplier's name of hazardous chemical ingredients in Safety Data Sheet(s), for the necessity of national security or

trade secret protection purposes, shall provide the following written documentation to the Competent Authority of the Central Government for approval:

1. Documents that prove such information have been identified as a national security or a trade secret cause.
2. Counter measures undertaken to protect information of national security or trade secrets.
3. Assessment to financial benefits of the information to the applicant and the competitors.
4. Explanations and proofs regarding hazard classification of hazardous chemical ingredients contained in the products.

Hazardous chemical ingredients possessing the following hazards as specified in National Standard CNS15030 Classification, shall not apply for the aforementioned Safety Data Sheet withheld from public disclosure:

1. Acute toxicity category 1, category 2, or category 3
2. Skin corrosion/irritation category 1
3. Serious eye damage/eye irritation category 1
4. Respiratory or skin sensitization
5. Germ cells mutagenicity
6. Carcinogenicity
7. Toxic to reproduction
8. Specific target organ systemic toxicity -single exposure, category 1
9. Specific target organ systemic toxicity -repeated exposure, category 1

When handling affairs in pursuant to the Paragraph 1, the Competent Authority of the Central Government may consult scholars, experts before granting approval.

Article 19 The Competent Authority, Labor Inspection Agency, or medical doctors, emergency response personnel in response to first aid and rescue need, may request the manufacture, importer, supplier, or enterprise to provide Safety Data Sheets and information withheld from disclosure. The manufacture, importer, supplier, or enterprise shall not deny the request.

Those who acquired trade secrets in the previous paragraph shall keep the information confidential.

Chapter 4 Supplementary Provisions

Article 20 The labelling for ships, aircraft, or vehicles transporting hazardous chemicals are




subject to related transportation laws and regulations.




Article 21 The labelling of radioactive substances and hazardous chemicals possessing environmental hazard as specified in National Standards CNS 15030 Classification are subject to laws and regulations related to ionizing radiation and environmental protection.










Article 22 The labelling of hazardous chemicals such as agrochemicals and environmental chemicals shall subject to the provisions of agro-pesticides, environmental agents and other related laws.













Article 23 These regulations shall come into force on July 3rd, 2014.














Attachment 1: Classification and Labeling Requirements for Hazardous Chemicals














Hazardous chemicals Category			Label elements			Notes
Hazards	Hazard Class	Division, Category, or Type	Hazard Pictogram	Signal Words	Hazard Statements	To be handled in accordance with National Standards 15030 Classification. (Each hazard to be handled in accordance with CNS 15030-1 to CNS 15030-26) .
Physical Hazards	Explosives	Unstable explosives		Danger	Unstable explosive	
		1.1 Substances or articles that have mass explosion hazard		Danger	Explosive; mass explosion hazard	
		1.2 Substances or articles which have a projection hazard but not a mass explosion hazard		Danger	Explosive; severe projection hazard	











		1.3 Substances or articles which have a fire hazard and either a minor blast hazard or a minor projection hazard but not a mass explosion hazard		Danger	Explosive; Fire, blast or projection hazard	
		1.4 Substances or articles that do not pose a significant hazard		Warning	Fire or projection hazard	
		1.5 Very insensitive substances or articles which have a mass explosion hazard	1.5 (orange background)	Danger	May mass explode in fire	
		1.6 Extremely insensitive substances or articles which do not have a mass explosion hazard	1.6 (orange background)	None	None	
	Flammable Gases	Category 1		Danger	Extremely flammable gas	
		Category 2	No symbol	Warning	Flammable gas	

Flammable Aerosols	Category 1		Danger	Extremely flammable aerosol	
	Category 2		Warning	Flammable aerosol	
Oxidizing Gases	Category 1		Danger	May cause or intensify fire; oxidizer	
Gases under pressure	Compressed gas		Warning	Contains gas under pressure; may explode if heated	
	Liquefied gas		Warning	Contains gas under pressure; may explode if heated	
	Refrigerated liquefied gas		Warning	Contains refrigerated gas; may cause cryogenic burns or injury	
	Dissolved gas		Warning	Contains gas under pressure; may explode if heated	
Flammable liquids	Category 1		Danger	Extremely flammable liquid and vapour	
	Category 2		Danger	Highly flammable liquid and vapour	

	Category 3		Warning	Flammable liquid and vapour	
	Category 4	No symbol	Warning	Combustible liquid	
Flammable solids	Category 1		Danger	Flammable solid	
	Category 2		Warning	Flammable solid	
Self-reactive substances and mixtures	Type A		Danger	Heating may cause an explosion	
	Type B	 	Danger	Heating may cause a fire or explosion	
	Types C and D		Danger	Heating may cause a fire	
	Types E and F		Warning	Heating may cause a fire	
	Type G	No symbol	None	None	
Pyrophoric liquids	Category 1		Danger	Catches fire spontaneously if exposed to air	
Pyrophoric solids	Category 1		Danger	Catches fire spontaneously if exposed to air	
Self-heating substances and mixtures	Category 1		Danger	Self-heating; may catch fire	
	Category 2		Warning	Self-heating in large quantities; may catch fire	

Substances and mixtures, which in contact with water, emit flammable gases	Category 1		Danger	In contact with water releases flammable gases which may ignite spontaneously	
	Category 2		Danger	In contact with water releases flammable gases	
	Category 3		Warning	In contact with water releases flammable gases	
Oxidizing liquids	Category 1		Danger	May cause fire or explosion; strong oxidizer	
	Category 2		Danger	May intensify fire; oxidizer	
	Category 3		Warning	May intensify fire; oxidizer	
Oxidizing solids	Category 1		Danger	May cause fire or explosion; strong oxidizer	
	Category 2		Danger	May intensify fire; oxidizer	
	Category 3		Warning	May intensify fire; oxidizer	
Organic peroxides	Type A		Danger	Heating may cause an explosion	
	Type B	 	Danger	Heating may cause a fire or explosion	
	Types C and D		Danger	Heating may cause a fire	

		Types E and F		Warning	Heating may cause a fire	
		Type G	No symbol	None	None	
	Corrosive to metals	Category 1		Warning	May be corrosive to metals	
Health Hazards	Acute toxicity: oral	Category 1		Danger	Fatal if swallowed	
		Category 2		Danger	Fatal if swallowed	
		Category 3		Danger	Toxic if swallowed	
		Category 4		Warning	Harmful if swallowed	
		Category 5	No symbol	Warning	May be harmful if swallowed	
	Acute toxicity: skin	Category 1		Danger	Fatal in contact with skin	
		Category 2		Danger	Fatal in contact with skin	
		Category 3		Danger	Toxic in contact with skin	
		Category 4		Warning	Harmful in contact with skin	
		Category 5	No symbol	Warning	May be harmful in contact with skin	
	Acute toxicity: inhalation	Category 1		Danger	Fatal if inhaled	
		Category 2		Danger	Fatal if inhaled	
		Category 3		Danger	Toxic if inhaled	

	Category 4		Warning	Harmful if inhaled	
	Category 5	No symbol	Warning	May be harmful if inhaled	
Skin corrosion/irritation	Category 1A		Danger	Causes severe skin burns and eye damage	
	Category 1B				
	Category 1C				
	Category 2		Warning	Causes skin irritation	
	Category 3	No symbol	Warning	Causes mild skin irritation	
Serious eye damage/eye irritation	Category 1		Danger	Causes serious eye damage	
	Category 2A		Warning	Causes serious eye irritation	
	Category 2B	No symbol	Warning	Causes eye irritation	
Respiratory sensitization	Category 1		Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled	
Skin sensitization	Category 1		Warning	May cause an allergic skin reaction	
Germ cells mutagenicity	Category 1A		Danger	May cause genetic defects	
	Category 1B				
	Category 2		Warning	Suspected of causing genetic defects	
Carcinogenicity	Category 1A		Danger	May cause	

	Category 1B			cancer	
	Category 2		Warning	Suspected of causing cancer	
Toxic to reproduction	Category 1A		Danger	May damage fertility or the unborn child	
	Category 1B				
	Category 2		Warning	Suspected of damaging fertility or the unborn child	
	Additional category for effects on or via lactation	No symbol	None	May cause harm to breast-fed children	
Specific target organ systemic toxicity (single exposure)	Category 1		Danger	Causes damage to organs	
	Category 2		Warning	May cause damage to organs	
	Category 3		Warning	May cause Respiratory irritation or may cause drowsiness or dizziness	
Specific target organ systemic toxicity (repeated exposure)	Category 1		Danger	Causes damage to organs through prolonged or repeated exposure	

		Category 2		Warning	May cause damage to organs through prolonged or repeated exposure	
Aspiration hazard		Category 1		Danger	May be fatal if swallowed and enters airways	
		Category 2		Warning	May be harmful if swallowed and enters airways	

Attachment 2: Label Format



Name:

Hazardous ingredients:

Signal words:

Hazard statements:

Precautionary statements:

Manufacturer, importer, or supplier:

(1) Name :

(2) Address :

(3) Telephone Number :

* For more detailed information, please refer to the Safety Data Sheet.

Notes:

1. Hazard pictograms, signal words, and hazard statements are specified in Appendix 1.
2. When two or more hazard pictograms are required, they should all be listed so as to be clearly identified. There may be different ways of listing depending on the conditions of containers.

Attachment 3: Table of Concentration Limits for each Health Hazard Class

Health Hazard Class	Concentration Limit
Acute toxicity	$\geq 1.0\%$
Skin corrosion/Irritation	$\geq 1.0\%$
Serious damage to eyes/eye irritation	$\geq 1.0\%$
Respiratory/Skin sensitization	$\geq 1.0\%$
Mutagenicity: Category 1	$\geq 0.1\%$
Mutagenicity : Category 2	$\geq 1.0\%$
Carcinogenicity	$\geq 0.1\%$
Reproductive toxicity	$\geq 0.1\%$
Specific target organ systemic toxicity (single exposure)	$\geq 1.0\%$
Specific target organ systemic toxicity (repeated exposure)	$\geq 1.0\%$

Attachment 4: Content and Template for Safety Data Sheet

1. Identification

Chemicals Name:
Other Names:
Recommended use and restrictions on use:
Names, addresses, and phone numbers of the <u>manufacturer, importer or supplier</u> :
Emergency contact phone numbers/fax numbers:

2. Hazard(s) identification

Chemicals hazard class:
Label content:
Other hazards:

3. Composition/information on ingredients

Pure material:

Chinese and English name:
Synonyms:
Chemical Abstract Service No. (CAS No.):
The hazardous ingredient (% of the content):

Mixtures:

Chemical properties:	
Chinese and English names of the hazardous ingredients	Concentration or concentration ranges (ingredient percentage)

4. First-aid measures

The first aid measures for different exposure routes: inhalation: skin contact: eye contact: ingestion:
The most important symptoms and hazardous effects:
The protection of first-aiders:
Notes to physicians:

5. Fire-fighting measures

Suitable fire extinguishing media:
Specific hazards may be encountered during fire-fighting:
Specific fire-fighting methods:
Special equipment for the protection of firefighters:

6. Accidental release measures

Personal precautions:
Environmental precautions:
Methods for cleaning up:

7. Handling and storage

Handling:
Storage:

8. Exposure controls/personal protection

Engineering control:
Control parameters: 8 hours time weighted average exposure limits/Short-term exposure limits/maximum exposure limits biological standards:
Personal protective equipment: Respiratory protection: Hand protection: Eye protection: Skin and body protection:
Hygiene measures:

9. Physical and chemical properties:

Appearance (physical state, color, etc.)	Odor:
Odor threshold:	Melting point:
pH value:	Boiling point/boiling point range:
Flammability (solid, gas)	Flash point: °F °C
Decomposition temperature:	Test method: <u>(Open cup or closed cup)</u>
Auto-ignition temperature:	Explosion limits:
Vapor pressure:	Vapor density:
Density:	Solubility:
Partition coefficient(n-octanol/water,log Kow):	Evaporation rate

10. Stability and reactivity

Stability:
Possible hazardous reactions under specific conditions:
Conditions to avoid:
Materials to avoid:
Hazardous decomposition products:

11. Toxicological information

Routes of exposure:
Symptoms:
Acute toxicity:
Chronic toxicity or long term toxicity:

12. Ecological information:

Ecotoxicity:
Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

13. Disposal considerations

Methods of waste disposal:

14. Transport information

United Nations number(UN No):
UN Proper shipping name:
Transport hazard class(es):
Packing group:
Marine pollutant(Yes/No):
Specific transport measures and precautionary conditions:

15. Regulatory information

Applicable regulations:

16. Other information

Literature references	
Organization	Name:

that prepared the <u>SDS</u>	Address/telephone number:	
Person who prepared the <u>SDS</u>	Title:	Name (signature):
Date that the <u>SDS</u> was prepared:		

Items that should be listed in the Safety Data Sheet:

1. Identification
chemicals name 、 other names 、 recommended use and restrictions on use 、 names, addresses, and phone numbers of the manufacturer, importer or supplier, emergency contact phone numbers/fax numbers.
2. Hazard(s) identification
label content 、 other hazards 、 chemicals hazard class.
3. Composition/information on ingredients
pure material: Chinese and English name 、 synonyms 、 chemical abstract service number (CAS No.) 、 the hazardous ingredient (% of the content).
mixtures: chemical properties 、 Chinese and English names of the hazardous ingredients 、 concentration or concentration ranges (ingredient percentage).
4. First-aid measures
the first aid measures for different exposure routes 、 the most important symptoms and hazardous effects 、 the protection of first-aiders 、 notes to physicians.
5. Fire-fighting measures
suitable fire extinguishing media 、 specific hazards may be encountered during fire-fighting 、 specific fire-fighting methods 、 special equipment for the protection of firefighters.
6. Accidental release measures
personal precautions 、 environmental precautions 、 methods for cleaning up.
7. Handling and storage
handling 、 storage.
8. Exposure controls/personal protection
engineering control 、 control parameters 、 personal protective equipment 、 hygiene measures.
9. Physical and Chemical Properties
appearance (physical state, color) 、 odor 、 odor threshold 、 pH value 、 melting point 、 boiling point/boiling point range 、 flammability (solid, gas) 、 decomposition temperature 、 flash point 、 auto-ignition temperature 、 explosion limits 、 vapor pressure 、 vapor density 、 density 、 solubility 、 partition coefficient(n-octanol/water, log Kow) 、 evaporation rate.
10. Stability and Reactivity
stability, possible hazardous reactions under specific conditions, materials to avoid, hazardous decomposition products.

11. Toxicological information

routes of exposure 、 symptoms 、 acute toxicity 、 chronic toxicity or long-term toxicity.

12. Ecological Information

ecotoxicity 、 persistence and degradability 、 bioaccumulative potential 、 mobility in soil, other adverse effects.

13. Disposal considerations

methods of waste disposal.

14. Transport Information

United Nations number(UN No) 、 UN Proper shipping name 、 transport hazard class(es) 、 packing group, marine pollutant (yes/no) 、 specific transport measures and precautionary conditions.

15. Regulatory Information

applicable regulations.

16. Other Information

literature references 、 the organization that prepared the SDS 、 the person that prepared the SDS 、 the date that the SDS was prepared.

Attachment 5 Hazardous Chemicals Inventory List

Chemical Name: _____

Synonyms: _____

Code of the corresponding SDS: _____

Manufacturer, Importer or

Supplier: _____

Address: _____

Telephone: _____

Usage Information

Location	Average Quantity	Maximum Quantity	User
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Storage Information

Location	Average Quantity	Maximum Quantity
_____	_____	_____
_____	_____	_____
_____	_____	_____

List Preparation Date: : _____