

Toxic Chemical Substances Labeling and Materials Safety Data Sheets Regulations

Original 18 articles determined and promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No. 0960095329 on December 17, 2007.

Enforcement from December 31, 2008 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No. 0960101710 on December 31, 2007.

Revisions to Articles 3 and 9 promulgated by Environmental Protection Administration Order Huan-Shu-Tu-Tzu No. 0980078120 on September 7, 2009.

Article 1

These Regulations are determined pursuant to Article 17, Paragraph 2 of the Toxic Chemical Substances Control Act (herein referred to as this Act).

Article 2

As referred to in these Regulations, the scope of container, packaging, handling sites and facilities standards shall be as follows:

- I. Containers and packaging refer to any bags, drums, bottles, boxes, cans, barrels, and other articles that can be used to contain toxic chemical substances, but shall not include storage tanks, pipes, reactors, and other fixed facilities.
- II. Handling sites and facilities refer to sites for the manufacture, import, export, sale, transport, use, and storage of toxic chemical substances, their conveyance pipelines, and other fixed facilities, including storage tanks, reactors, and transport-related holding, loading, and unloading sites, but shall not refer to facilities used to perform chemical reactions or the engines, fuel tanks, or other operating systems of transportation vehicles.

Article 3

The containers or packaging of toxic chemical substances shall comply with the classification and labeling key points determined in Attached Table 1 and shall clearly label the following items in accordance with the format in Attached Table 2:

- I. Hazard symbol: A square at a 45° angle to the vertical direction consisting of a thick red outline on a white background; the interior of the square shall contain black symbols of sufficient size for clear identification purposes.
- II. Content:
 - A. Name
 - B. Hazardous contents: All toxic chemical substances exceeding the control concentration shall be labeled with the Chinese and English names announced by the central competent authority; the words "toxic chemical substances" and the weight percentages of the toxic chemical substances contained therein shall be stated (w/w) 。
 - C. Precautions
 - D. Hazard warning information: Warning of the hazardous characteristic information listed in Attached Table 1, and the toxic hazards determined in Article 3 of this Act.
 - E. Hazard prevention measures: Pollution control measures taken in accordance with the characteristics of the hazardous substance.
 - F. Name, address, and telephone number of the manufacturer or vendor: A vendor is a handler that has imported a toxic chemical substance.

If, with regard to the labeling in the foregoing paragraph, a hazardous substance cannot be

classified in accordance with the classification scheme in Attached Table 1, only the items in Subparagraph 2 of the foregoing paragraph must be labeled.

Containers or packaging with a capacity of less than 100 milliliters specified in Paragraph 1 may be marked only with the name, hazard symbol, and precautions.

Article 4

Manufacturers and importers of toxic chemical substances shall mark each container or package. Those who purchase toxic chemical substances shall maintain the clarity and integrity of marking content.

Article 5

The user shall label the containers or packaging of toxic chemical substances individually packaged or mixed for self-use as prescribed in Article 3.

When, in the foregoing paragraph, the same toxic chemical substances are contained in several containers or packages in the same location, a sign may be installed in a prominent location as prescribed in Article 9 instead of labels on containers or packaging.

Article 6

When one of the following situations applies, the containers or packaging of toxic chemical substances are exempted from the labeling prescribed in Article 3:

- I. When the outer container or packaging already bears markings, inner containers or packaging used only as lining and not subsequently removed.
- II. When the inner container or packaging already bears markings, outer containers or packaging allowing the marking items to be seen clearly.
- III. Toxic chemical substances are taken from marked containers or packaging and immediately used solely by the current shift.
- IV. Toxic chemical substances are taken from marked containers or packaging and used for experiments or research by a laboratory on a self-use basis.

Article 7

Markings on the containers or packaging of exported toxic chemical substances may comply with customary international practice or solely with relevant regulations of the receiving country.

Article 8

A handler shall perform the marking of vessels, aircraft, or transport vehicles carrying toxic chemical substances in accordance with relevant transport regulations in transportation laws, and shall not be subject to the restrictions of these Regulations.

Article 9

Toxic chemical substances handling sites and facilities shall have summary marking of the following items in the form of signs installed in clearly visible locations:

- I. Hazard symbol, name, hazardous contents and precautions.
- II. Hazard warning information: Warning of the hazardous characteristic information listed in Attached Table 1, including an explanation of toxicological characteristics and warning to avoid inhalation, ingestion, or direct skin contact.
- III. Hazard prevention measures: Including poisoning first aid methods, pollution control measures and emergency disposal methods, alarm announcement methods, use regulations for fire prevention equipment or other accident-prevention equipment, personnel mobilization and emergency rescue regulations, and notification methods in conjunction with emergency response.

A single handling site handling many toxic chemical substances may write all marking content on the same sign; if the content of the items in Subparagraphs 2 and 3 are the same, they may be combined in the text.

Article 10

When one of the following situations applies, the containers or packaging of toxic chemical substances are exempted from the labeling prescribed in Article 3:

- I. A temporary storage site for toxic chemical substances for which a disposal registration application has been made pursuant to Article 13, Paragraph 3 of this Act.
- II. A warehouse for the temporary placement of nonspecific toxic chemical substances before or after air or sea transport, and already marked with the words "Dangerous Goods Storage".
- III. A handling site employed solely for experimentation, research, and educational uses, where the handled quantity is less than that in the large-scale handling standards, and where the entrances and exits are already marked with the words "Handling Premises of Toxic Chemicals".

Article 11

A facility containing ducts, pipes, or other conveyance system used for the handling of toxic chemical substances shall additionally mark in prominent places the flow directions and Chinese and English names or abbreviations of the toxic chemical substances present. Such markings shall be in any location near a conveyance channel that is clearly visible. When necessary, such markings may be replaced with hanging signs.

Article 12

A handler manufacturing or importing toxic chemical substances shall produce materials safety data sheets in accordance with format prescribed by the central competent authority, and shall regularly review the content of its materials safety data sheets for correctness. Records of updating of content, date, and version, etc. shall be preserved three years for future reference.

The emergency contact telephone number in the materials safety data sheets in the foregoing paragraph shall be accessible at all times and able to accept accident response consultation.

Article 13

When toxic chemical substances are purchased at tender in a customs auction or imported, the labeling of the containers or packaging shall be completed, and materials safety data sheets produced, within four days after taking possession from customs.

Article 14

When a toxic chemical substance is a mixture, materials safety data sheets shall be produced and labeling performed in accordance with the substance's toxicological hazard after mixing.

The chemical names and judged toxicological hazard of the main components toxic chemical substances in the foregoing paragraph shall be listed as follows:

- I. Overall testing has been performed; toxicological hazard is based on the results of overall testing.
- II. Overall testing has not been performed, apart from where corroborating scientific data is available, the health hazard and environmental hazard of such substances shall comply with mixture classification standards in Z1501 chemical product classification and labeling standards in CNS ; data with a scientific basis shall be employed to assess the physical hazard of substances that pose physical hazards such as combustion, explosion, or reaction.

Article 15

Toxic chemical substances with the same regulatory control number but different compositions or concentrations shall have different Chinese and English substance names and separate materials safety

data sheets.

Article 16

Sellers of toxic chemical substances shall have materials safety data sheets available for provision with products to purchasers of toxic chemical substances.

Article 17

Toxic chemical substance handling personnel shall keep materials safety data sheets in an easily accessible location in the handling site.

Article 18

The enforcement date of these Regulations shall be determined by the central competent authority.

Attached Table 1 Key Points Concerning the Classification and Labeling of Hazardous Substances

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
Explosive	Unstable explosive		Hazard	Unstable explosive	Table of definitions and graphics in accordance with Chinese National Standards CNS 15030 Z1501.
	Division 1.1 Substances or goods with an overall explosion hazard.		Hazard	Explosive; overall explosion hazard.	
	Division 1.2 Substances or goods with projection hazard, but no overall explosion hazard.		Hazard	Explosive; severe projection hazard.	
	Division 1.3 Substances or goods that cause fire and have mild explosion or projection hazard, but have no overall explosion hazard.		Hazard	Explosive; causes fire, explosion or projection hazard.	
	Division 1.4 Substances or goods with no major hazard.		Precautions	Causes fire or projection hazard.	
	Division 1.5 Substances or goods that are	1.5 (orange)	Hazard	May completely explode in a fire.	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	highly insensitive, but have overall explosion hazard.	background)			
	Division 1.6 Substances or goods that are extremely insensitive, and have no overall explosion hazard.	1.6 (orange background)	None	None	
	Flammable gases	Category 2		Hazard	Extremely flammable gas
	Category 2	None	Precautions	Flammable gas	
Flammable aerosols	Category 1		Hazard	Extremely flammable aerosols	
	Category 2		Precautions	Flammable aerosols	
Oxidizing gases	Category 1		Hazard	Will cause or intensify combustion; oxidizing agent.	
Pressurized gases	Compressed gases		Precautions	Contains pressurized gas; will explode if heated.	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	Liquefied gases		Precautions	Contains pressurized gas; will explode if heated.	
	Refrigerated liquefied gases		Precautions	Contains refrigerated gas; may cause low-temperature burns or damage.	
	Dissolved gases		Precautions	Contains pressurized gas; will explode if heated.	
Flammable liquids	Category 1		Hazard	Extremely flammable liquid and vapor.	
	Category 2		Hazard	Highly flammable liquid and vapor.	
	Category 3		Precautions	Flammable liquid and vapor.	
	Category 4	None	Precautions	Combustible liquid	
Flammable solids	Category 1		Hazard	Flammable solid	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	Category 2		Precautions	Flammable solid	
Self-reactive substances	Type A		Hazard	May explode if heated.	
	Type B		Hazard	May cause fire or explode if heated.	
					
	Type C and Type D		Hazard	May cause fire if heated.	
	Type E and Type F		Precautions	May cause fire if heated.	
Type G	None	None	None		
Pyrophoric liquids	Category 1		Hazard	May ignite if exposed to air.	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
Pyrophoric solids	Category 1		Hazard	May ignite if exposed to air.	
Self-igniting substances	Category 1		Hazard	Self-heating; may burn.	
	Category 2		Precautions	Self-heating in large quantities; may burn.	
Dangerous when wet substances	Category 1		Hazard	May emit flammable gases when in contact with water.	
	Category 2		Hazard	Emits flammable gases when in contact with water.	
	Category 3		Precautions	Emits flammable gases when in contact with water.	
Oxidizing liquids	Category 1		Hazard	May induce combustion or explosion; strong oxidizing agent.	
	Category 2		Hazard	May intensify combustion; oxidizing agent.	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	Category 3		Precautions	May intensify combustion; oxidizing agent.	
Oxidizing solids	Category 1		Hazard	May induce combustion or explosion; strong oxidizing agent.	
	Category 2		Hazard	May intensify combustion; oxidizing agent.	
	Category 3		Precautions	May intensify combustion; oxidizing agent.	
Organic peroxides	Type A		Hazard	May explode if heated.	
	Type B		Hazard	May cause fire or explode if heated.	
					
Type C and Type D		Hazard	May cause fire if heated.		

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	Type E and Type F		Precautions	May cause fire if heated.	
	Type G	None	None	None	
Metal-corroding substances	Category 1		Precautions	May corrode metal.	
Acutely toxic substances: ingestion	Category 1		Hazard	Fatal if ingested.	
	Category 2		Hazard	Fatal if ingested.	
	Category 3		Hazard	Toxic if ingested.	
	Category 4		Precautions	Harmful if ingested.	
	Category 5	None	Precautions	May be harmful if ingested.	
Acutely toxic substance: skin contact	Category 1		Hazard	Fatal if skin contacted.	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	Category 2		Hazard	Fatal if skin contacted.	
	Category 3		Hazard	Toxic if skin contacted.	
	Category 4		Precautions	Harmful if skin contacted.	
	Category 5	None	Precautions	May be harmful if skin contacted.	
Acutely toxic substance: inhalation	Category 1		Hazard	Fatal if inhaled.	
	Category 2		Hazard	Fatal if inhaled.	
	Category 3		Hazard	Toxic if inhaled.	
	Category 4		Precautions	Harmful if inhaled.	
	Category 5	None	Precautions	May be harmful if inhaled.	
Corrosive/skin-	Category 1A		Hazard	Causes severe skin burns and eye injuries	

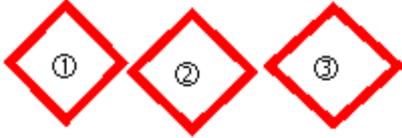
Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	Category 1B				
	Category 1C				
	Category 2		Precautions	Causes skin irritation.	
	Category 3	None	Precautions	Causes mild skin irritation.	
Substances causing severe injury/irritation to the eyes	Category 1		Hazard	Causes severe eye injuries	
	Category 2A		Precautions	Causes eye irritation	
	Category 2B	None	Precautions	Causes eye irritation	
Respiratory allergens	Category 1		Hazard	May cause allergy, asthma symptoms, or breathing difficulties when inhaled.	
Skin allergens	Category 1		Precautions	May cause skin allergies.	
Reproductive cell mutagenic substances.	Category 1A		Hazard	May cause hereditary defects.	
	Category 1B				

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
	Category 2		Precautions	Suspected of causing hereditary defects.	
Carcinogens	Category 1A		Hazard	May be carcinogenic.	
	Category 1B				
	Category 2		Precautions	Suspected of being carcinogenic.	
Reproductive toxic substances	Category 1A		Hazard	May be harmful to reproductive ability or fetus.	
	Category 1B				
	Category 2		Precautions	Suspected of being harmful to reproductive ability or fetus.	
	Added category of substances affecting nursing period or exerting effect during the nursing period	None	None	None	May be harmful to nursing children.
Substances toxic to specifically targeted organ systems; one-time	Category 1		Hazard	Harmful to organs.	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
exposure	Category 2		Precautions	May be harmful to organs.	
	Category 3		Precautions	May cause respiratory irritation, sleepiness, or dizziness.	
Substances toxic to specifically targeted organ systems; repeated exposure	Category 1		Hazard	Long-term or repeated exposure harmful to organs.	
	Category 2		Precautions	Long-term or repeated exposure may be harmful to organs.	
Aspiration hazard	Category 1		Hazard	May be fatal if ingested and enters respiratory tract.	
	Category 2		Precautions	May be harmful if ingested and enters respiratory tract.	
Substances hazardous to the aquatic environment (acute toxicity)	Category 1		Precautions	Extremely toxic to aquatic organisms.	
	Category 2	None	None	Toxic to aquatic organisms.	
	Category 3	None	None	Harmful to aquatic organisms.	

Hazardous substance classification		Key label items			Notes
Hazardous substances	Division, category, or type	Hazard symbol	Precautions	Hazard warning information	
Substances hazardous to the aquatic environment (chronic toxicity)	Category 1		Precautions	Extremely toxic to aquatic organisms and possesses a long-term continuous effect.	
	Category 2		None	Toxic to aquatic organisms and possesses a long-term continuous effect.	
	Category 3	None	None	Harmful to aquatic organisms and possesses a long-term continuous effect.	
	Category 4	None	None	May be harmful to aquatic organisms and cause a long-term continuing effect.	

Attached Table 2 Labeling Format



Names:

Hazardous contents:

Precautions:

Hazard warning information:

Hazard prevention measures:

Manufacturer or Supplier:

1. Name:

2. Address:

3. Telephone:

Please refer to the materials safety data sheets for more detailed information.

Remarks:

- I. Hazard symbols, precautions, and hazard warning information shall comply with the regulations of Attached Table 1.
- II. If there are two or more hazard symbols, they shall be arranged in accordance with the container or packaging size so as to achieve clear visibility.