Safety Data Sheet

59 Mix VOCs in methanol

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*Prepared according to GB/T 17519-2013 and GB/T 16483-2008

1 Identification of the chemical and supplier

Product identifier

Product Name	59 Mix VOCs in methanol
Cat No.	BWQ0437-2016
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier of the Safety Data Sheet

Name of the company	Weiyel Inc
Address of the company	Hedian Light Industrial Park, Chengguan Town, Shangcheng County, Xinyang City, Henan Province, China
Post code	465350
Telephone number	010-58103678
Fax number	010-84840368
E-mail address	info@weiyel.com

Emergency phone number

Emergency phone number	010-58103678

2 Hazard(s) identification

Emergency overview

Liquid. Highly flammable, its vapor and air mixture can form explosive mixture. Toxic if swallowed. Toxic in contact with skin. Slightly irritating to skin. SENSITISATION by skin contact. Toxic by inhalation. Carcinogenic. May damage fertility. Danger of serious damage to health by shortdated exposure. Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment. Harmful to ozone layer.

Hazard classification according to GHS

The following classification is based on Specification for classification and labelling of chemicals GB 30000.2-2013~GB 30000.29-2013、GB 30000.1-2024 and GB 30000.1-2025 series standards.

Flammable Liquids	Category 2
Acute Toxicity - Oral	Category 3
Acute Toxicity - Dermal	Category 3

Skin Corrosion/Irritation	Category 3
Skin Sensitization	Category 1
Acute Toxicity - Inhalation	Category 3
Germ Cell Mutagenicity	Category 1B
Carcinogenicity	Category 1
Reproductive Toxicity	Category 1
Specific Target Organ Toxicity Single Exposure	Category 1
Hazardous To The Aquatic Environment - Short-Term (Acute) Hazard	Category 3
Hazardous To The Aquatic Environment - Long-Term (Chronic) Hazard	Category 3
Hazardous To The Ozone Layer	Category 1

GHS Label elements

Hazard pictograms	
Signal word	Danger

Hazard statements

H225	Highly flammable liquid and vapour
H301	Toxic if swallowed
H311	Toxic in contact with skin
H316	Causes mild skin irritation
H317	May cause an allergic skin reaction
H331	Toxic if inhaled
H340	May cause genetic defects
H350	May cause cancer
H360	May damage fertility
H370	Causes damage to organs
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects
H420	Harms public health and the environment by destroying ozone in the upper atmosphere

Precautionary statements

- Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.

P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe gas/mist/vapour/spray.
P261	Avoid breathing gas/mist/vapour/spray.
P264	Wash face and hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

◆ Response

P311	Call a POISON CENTER/doctor.
P312	Call a POISON CENTER/doctor, if you feel unwell.
P321	Specific treatment (see on the label).
P322	Specific treatment (see on the label).
P330	Rinse mouth.
P361	Take off immediately all contaminated clothing.
P363	Wash contaminated clothing before reuse.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor.
P308+P313	IF exposed or concerned: Get medical advice/ attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P370+P378	Small fire: dry chemical, CO_2 or alcohol-resistant foam; Large fire: alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

◆ Storage

P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.

◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.
P502	Refer to manufacturer or supplier for information on recovery or recycling.

Hazard description

◆ Physical and chemical hazards

	Highly flammable liquids, its vapor and air mixture can form explosive mixture.

◆ Health hazards

Inhaled	Cough. Dizziness. Headache. Nausea. Weakness. Visual disturbance.
Ingestion	Abdominal pain. Shortness of breath. Vomiting. Convulsions. Unconsciousness. (Further see Inhalation).
Skin Contact	MAY BE ABSORBED! Dry skin. Redness.
Eye	Redness. Pain.

◆ Environmental hazards

	This product is harmful to aquatic life with long lasting effects. Please refer to 12th chapter of SDS.

3 Composition/information on ingredients

Substance/mixture

	Mixture

Component	CAS No.	EC No.	Concentration (wt, %)
1,1-dichloroethylene	75-35-4	200-864-0	0.125
Acetone	67-64-1	200-662-2	0.125
Iodomethane	74-88-4	200-819-5	0.125
Carbon disulphide	75-15-0	200-843-6	0.125
Dichloromethane	75-09-2	200-838-9	0.125
trans-dichloroethylene	156-60-5	205-860-2	0.125
1,1-dichloroethane	75-34-3	200-863-5	0.125
2,2-dichloropropane	594-20-7	209-832-0	0.125
cis-dichloroethylene	156-59-2	205-859-7	0.125
Butanone	78-93-3	201-159-0	0.125
Bromochloromethane	74-97-5	200-826-3	0.125
Chloroform	67-66-3	200-663-8	0.125
1,1,1-trichloroethane	71-55-6	200-756-3	0.125
Carbon tetrachloride	56-23-5	200-262-8	0.125
1,1-dichloropropene	563-58-6	209-253-3	0.125
Benzene	71-43-2	200-753-7	0.125
1,2-dichloroethane	107-06-2	203-458-1	0.125
Trichloroethylene	79-01-6	201-167-4	0.125
1,2-dichloropropane	78-87-5	201-152-2	0.125
Dibromomethane	74-95-3	200-824-2	0.125
bromodichloromethane	75-27-4	200-856-7	0.125

4-methylpentan-2-one	108-10-1	203-550-1	0.125
Toluene	108-88-3	203-625-9	0.125
1,1,2-trichloroethane	79-00-5	201-166-9	0.125
Tetrachloroethylene	127-18-4	204-825-9	0.125
1,3-dichloropropane	142-28-9	205-531-3	0.125
Hexan-2-one	591-78-6	209-731-1	0.125
Dibromochloromethane	124-48-1	204-704-0	0.125
1,2-dibromoethane	106-93-4	203-444-5	0.125
Chlorobenzene	108-90-7	203-628-5	0.125
1,1,1,2-tetrachloroethane	630-20-6	211-135-1	0.125
Ethylbenzene	100-41-4	202-849-4	0.125
1,1,2-trichloropropane	598-77-6	209-951-8	0.125
m-xylene	108-38-3	203-576-3	0.125
p-xylene	106-42-3	203-396-5	0.125
o-xylene	95-47-6	202-422-2	0.125
Styrene	100-42-5	202-851-5	0.125
Bromoform	75-25-2	200-854-6	0.125
Cumene	98-82-8	202-704-5	0.125
Bromobenzene	108-86-1	203-623-8	0.125
1,1,2,2-tetrachloroethane	79-34-5	201-197-8	0.125
1,2,3-trichloropropane	96-18-4	202-486-1	0.125
Propylbenzene	103-65-1	203-132-9	0.125
2-chlorotoluene	95-49-8	202-424-3	0.125
Mesitylene	108-67-8	203-604-4	0.125
4-chlorotoluene	106-43-4	203-397-0	0.125
tert-butylbenzene	98-06-6	202-632-4	0.125
1,2,4-trimethylbenzene	95-63-6	202-436-9	0.125
sec-butylbenzene	135-98-8	205-227-0	0.125
1,3-dichlorobenzene	541-73-1	208-792-1	0.125
p-cymene	99-87-6	202-796-7	0.125
1,4-dichlorobenzene	106-46-7	203-400-5	0.125
n-Butylbenzene	104-51-8	203-209-7	0.125
1,2-dichlorobenzene	95-50-1	202-425-9	0.125
1,2-dibromo-3-chloropropane	96-12-8	202-479-3	0.125
1,2,4-trichlorobenzene	120-82-1	204-428-0	0.125
Naphthalene	91-20-3	202-049-5	0.125

1,2,3-trichlorobenzene	87-61-6	201-757-1	0.125
Hexachlorobuta-1,3-diene	87-68-3	201-765-5	0.125
Methanol	67-56-1	200-659-6	92.625

4 First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Ingestion	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.
Inhalation	Fresh air, rest. Refer for medical attention.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Advice for protecting the rescuer

1	Remove all sources of ignition and increase ventilation.
2	Avoid contact with skin and eyes.
3	Avoid inhalation of vapor or mist.
4	Use personal protective equipment including respirator.

Special note to the doctor

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Small fire: dry chemical, CO_2 or alcohol-resistant foam; Large fire: alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the substance or mixture

1	Will form explosive mixtures with air.
2	Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/ or vapour concentration.
3	Vapours may travel to source of ignition and flash back.
4	Liquid and vapour are flammable.

5	May emit poisonous fumes on fire.
6	Development of hazardous combustion gases or vapor possible in the event of fire.
7	May expansion or decompose explosively when heated or involved in fire.

Fire precautions and protective measures

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Avoid breathing vapours and contacting with skin and eye.
2	Beware of vapours accumulating to form explosive concentrations.
3	Vapours can accumulate in low areas.
4	Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves.
5	Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire.
6	Do not touch or walk through spilled material.
7	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
8	Use personal protective equipment,do not breathe gas/mist/vapour/spray.
9	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
10	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-static clothing.
2	In case of small amount of spillage, use clean non sparking tools to collect absorption materials.
3	In case of large amount of spillage, construct cofferdam or dig a hole to collect the spillage. Use foam cover to reduce evaporation. Water spray mist can reduce evaporation, but can not reduce the flammability of the leakage in the restricted space.
4	Collect absorbent material using a clean, non-sparking tool.
5	Cover with anti-solvent foam to reduce evaporation.
6	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
7	Water spray reduces evaporation but does not reduce the flammability of spills in confined spaces.
8	Do not touch or cross spills.
9	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-virus suits.
10	Spray water disperses the vapor and dilutes the liquid spill.
11	Do not touch broken containers and spills before putting on appropriate protective clothing.

12	Cut off the source of the leak as much as possible.
13	Keep leaks in a ventilated place.
14	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
15	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
16	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.
17	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Preventive measures to prevent secondary disasters

1	Eliminate ignition sources and prevent leaks from entering sewers and basements.

7 Handling and storage

Handling

1	Avoid inhalation of vapors.
2	Use only non-sparking tools.
3	To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.
4	Use explosion proof equipment.
5	Handling is performed in a well ventilated place.
6	Wear suitable protective equipment.
7	Avoid contact with skin and eyes.
8	Keep away from heat/sparks/open flames/ hot surfaces.

Storage

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.

8 Exposure controls/personal protection

Control parameters

◆ Occupational Exposure limit values（Chemical Harmful Factors）

Component	Standard	OELs	Standard value mg/m^3	Critical adverse health effects	Remark
Acetone	GBZ 2.1-2019	PC-TWA	300	Respiratory tract and eye irritation; anesthesia; central nervous system damage	-
		PC-STEL	450		
		MAC	-		
Iodomethane	GBZ 2.1-2019	PC-TWA	10	Eye irritation, central nervous system damage	Skin
		PC-STEL	-		
		MAC	-		
Carbon disulphide	GBZ 2.1-2019	PC-TWA	5	Ocular and nasal mucosal irritation; peripheral nervous system damage	Skin
		PC-STEL	10		

		MAC	-		
Dichloromethane	GBZ 2.1-2019	PC-TWA	200	Carboxyhemoglobinemia, peripheral nervous system damage	G2A
		PC-STEL	-		
		MAC	-		
trans-dichloroethylene	GBZ 2.1-2019	PC-TWA	800	Central nervous system damage; eye and upper respiratory tract irritation	-
		PC-STEL	-		
		MAC	-		
cis-dichloroethylene	GBZ 2.1-2019	PC-TWA	800	Central nervous system damage; eye and upper respiratory tract irritation	-
		PC-STEL	-		
		MAC	-		
Butanone	GBZ 2.1-2019	PC-TWA	300	Eye and respiratory irritation	-
		PC-STEL	600		
		MAC	-		
Chloroform	GBZ 2.1-2019	PC-TWA	20	Liver damage, embryo/fetal damage, central nervous system damage	G2B
		PC-STEL	-		
		MAC	-		
1,1,1-trichloroethane	GBZ 2.1-2019	PC-TWA	900	Central nervous system damage; can cause arrhythmia; mild skin irritation	-
		PC-STEL	-		
		MAC	-		
Carbon tetrachloride	GBZ 2.1-2019	PC-TWA	15	Liver damage	Skin, G2B
		PC-STEL	25		
		MAC	-		
Benzene	GBZ 2.1-2019	PC-TWA	3	Nervous system damage; Hematotoxicity	Skin, G1
		PC-STEL	6		
		MAC	-		
1,2-dichloroethane	GBZ 2.1-2019	PC-TWA	7	Central nervous system symptoms; eye and respiratory tract irritation; liver and kidney damage	G2B
		PC-STEL	15		
		MAC	-		
Trichloroethylene	GBZ 2.1-2019	PC-TWA	30	Central nervous system injury	G1, sensiti zation
		PC-STEL	-		
		MAC	-		
1,2-dichloropropane	GBZ 2.1-2019	PC-TWA	350	Eye, skin, mucosa and respiratory tract irritation; central nervous system depression; liver and kidney damage	G1
		PC-STEL	500		
		MAC	-		
Toluene	GBZ 2.1-2019	PC-TWA	50	Neurological anesthesia, skin mucosal irritation	Skin
		PC-STEL	100		

		MAC	-		
Tetrachloroethylene	GBZ 2.1-2019	PC-TWA	200	Central nervous system damage	G2A
		PC-STEL	-		
		MAC	-		
Hexan-2-one	GBZ 2.1-2019	PC-TWA	20	Eye, nose irritation, anesthesia; peripheral neuropathy	Skin
		PC-STEL	40		
		MAC	-		
Chlorobenzene	GBZ 2.1-2019	PC-TWA	50	Liver damage	-
		PC-STEL	-		
		MAC	-		
Ethylbenzene	GBZ 2.1-2019	PC-TWA	100	Upper respiratory tract stimulation, central nervous system damage, eye irritation	G2B
		PC-STEL	150		
		MAC	-		
m-xylene	GBZ 2.1-2019	PC-TWA	50	Respiratory and eye irritation, central nervous system damage	-
		PC-STEL	100		
		MAC	-		
o-xylene	GBZ 2.1-2019	PC-TWA	50	Respiratory and eye irritation, central nervous system damage	-
		PC-STEL	100		
		MAC	-		
Styrene	GBZ 2.1-2019	PC-TWA	50	Eye, upper respiratory tract irritation; neurasthenic syndrome; peripheral neurological symptoms	Skin, G2B
		PC-STEL	100		
		MAC	-		
Bromoform	GBZ 2.1-2019	PC-TWA	5	Upper respiratory tract and eye irritation; liver and kidney toxicity	Skin
		PC-STEL	-		
		MAC	-		
1,2,3-trichloropropane	GBZ 2.1-2019	PC-TWA	60	Liver and kidney damage. Eye and upper respiratory tract irritation	Skin, G2A
		PC-STEL	-		
		MAC	-		
1,4-dichlorobenzene	GBZ 2.1-2019	PC-TWA	30	Eye, skin, upper respiratory tract irritation, liver damage	G2B
		PC-STEL	60		
		MAC	-		
1,2-dichlorobenzene	GBZ 2.1-2019	PC-TWA	50	Upper respiratory tract and eye irritation, liver damage	-
		PC-STEL	100		
		MAC	-		
Naphthalene	GBZ 2.1-2019	PC-TWA	50	Hematological effects, upper respiratory tract and eye irritation, eye damage	Skin, G2B
		PC-STEL	75		

		MAC	-		
Hexachlorobuta-1,3-diene	GBZ 2.1-2019	PC-TWA	0.2	Kidney damage	Skin
		PC-STEL	-		
		MAC	-		
Methanol	GBZ 2.1-2019	PC-TWA	25	Obvious anesthesia and eye and upper respiratory tract irritation; eye damage	Skin
		PC-STEL	50		
		MAC	-		

◆ Biological limit values

Component	Standard	Biological monitoring index	Biological limits value	Sampling time	Remark
Acetone	GBZ 2.1-2019	Acetone in urine	50 mg/L	End of the shift	
Carbon disulphide	GBZ 2.1-2019	2-Thiothiazolidine-4-carboxylic acid (TTCA) in urine	1.5 mmol/ mol C(r 2.2 mg/g Cr)	End of exposure/shift	
Dichloromethane	GBZ 2.1-2019	Dichloromethane in urine	0.3 mg/L	End of the shift	
Benzene	GBZ 2.1-2019	S-phenylmercapturic acid in urine(S-PMA)	47 μmol/mol Cr(100 μg/g Cr)	After the shift	
		t,t-muconic acid (tt-MA) in Urine	2.4 mmol/mol Cr(3.0 mg/g Cr)	After the shift	
Trichloroethylene	GBZ 2.1-2019	Trichloroacetic acid in urine	0.3 mmol/L(50 mg/L)	End of work weekend	
Toluene	GBZ 2.1-2019	Hippuric acid in urine	1 mmol/mol Cr(1.5 g/g Cr)	End of the shift (after the end of exposure)	
		Hippuric acid in urine	11 mmol/L(2.0 g/L)	End of the shift (after the end of exposure)	
		Toluene in End-Exhaled Air	20 mg/m3	End of the shift (15~30min after the end of exposure)	
		Toluene in End-Exhaled Air	5 mg/m3	Prior to the shift	
Tetrachloroethylene	GBZ 2.1-2019	Tetrachloroethylene in blood	0.2mg/L	Before the work weekend	
Ethylbenzene	GBZ 2.1-2019	Mandelic acid and phenylglyoxylic acid (MA and PGA)in urine	0.8 g/g Cr	End of the shift	
m-xylene	GBZ 2.1-2019	Methylhippuric acids in urine	0.3 g/g Cr or 0.4 g/L	End of the shift	
p-xylene	GBZ 2.1-2019	Methylhippuric acids in urine	0.3 g/g Cr or 0.4 g/L	End of the shift	
o-xylene	GBZ 2.1-2019	Methylhippuric acids in urine	0.3 g/g Cr or 0.4 g/L	End of the shift	
Styrene	GBZ 2.1-2019	Mandelic acid plus phenylglyoxylic	295 mmol/mol Cr(400 mg/g Cr)	End of the shift	

		acid inurine			

◆ Monitoring methods

1	EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
2	GBZ/T 300 and GBZ/T 160 series standard Determination of toxic substances in workplace air.

Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear anti static chemical protective gloves.
Respiratory protection	Must wear appropriate personal dust proof gas mask.
Skin and body protection	Must wear anti static chemical protective clothing and anti static shoes.

9 Physical and chemical properties

Physical and chemical properties

Appearance	colorless liquid
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	-98 (Methanol)
Initial boiling point and boiling range(°C)	65 (Methanol)
Flash point(Closed cup,°C)	9 (Methanol)
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit：50 (Methanol)；Lower limit：6 (Methanol)
Vapor pressure	12.9 kPa (20°C,Methanol)
Vapor density(Air = 1)	1.1 (Methanol)
Relative density(Water=1)	0.79 (20°C,Methanol)
Solubility	Miscible with water (Methanol)
n-octanol/water partition coefficient	-0.74 (Methanol)
Auto-ignition temperature(°C)	440 (Methanol)
Decomposition temperature(°C)	No information available

Kinematic viscosity	0.544 mPa (25°C,Methanol)

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	Reactions with metals form metal organic coumpounds. In contact with oxidants may cause a fire or an explosion. May catch fire spontaneously in the air. In contact with metals, oxidants, triethyl aluminium, amines, boranes and their derivatives may cause an explosion severely. In contact with halides may cause an active reaction. In contact with oxidants causes severe reactions, and may cause a fire or explosion.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Metal, oxidantss and alkali. Oxidants, chloroform and bromoformNitrate and nitrite, halogens oxyacid salts, potassium permanganate, persulfate, halogen and strong oxidants. Borane class and its derivatives, amines, metals, oxidants, triethyl aluminium, calcium and ethylene. Halides, oxidants and halogen. Oxidants, alkali metals, alkaline earth metals and aluminum.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
Methanol	5628mg/kg(Rat)	15800mg/kg(Rabbit)	83.867mg/L(Rat)
1,2,4-trichlorobenzene	756mg/kg(Rat)	6139mg/kg(Rat)	No information available
Tetrachloroethylene	2629mg/kg(Rat)	No information available	35.269mg/L(Mouse)
Chloroform	695mg/kg(Rat)	> 20000mg/kg(Rabbit)	47.702mg/L(Rat)
1,4-dichlorobenzene	500~5000mg/kg(Rat)	> 2000mg/kg(Rabbit)	No information available
Dibromomethane	108mg/kg(Rat)	> 4000mg/kg(Rabbit)	No information available
bromodichloromethane	430mg/kg(Rat)	No information available	No information available
1,1,1-trichloroethane	9600mg/kg(Rat)	No information available	98.209mg/L(Rat)
Hexan-2-one	2590mg/kg(Rat)	4800mg/kg(Rabbit)	32.772mg/L(Rat)
Mesitylene	No information available	No information available	24mg/L(Rat)
Chlorobenzene	1110mg/kg(Rat)	No information available	No information available
Bromochloromethane	5000mg/kg(Rat)	> 20000mg/kg(Rabbit)	No information available
m-xylene	5000mg/kg(Rat)	12200mg/kg(Rabbit)	No information available
1,1,2,2-tetrachloroethane	200mg/kg(Rat)	No information available	No information available
4-chlorotoluene	2100mg/kg(Rat)	No information available	No information available
1,2-dibromo-3-chloropropane	170mg/kg(Rat)	1400mg/kg(Rabbit)	No information available

1,2-dibromoethane	108mg/kg(Rat)	300mg/kg(Rabbit)	No information available
Hexachlorobuta-1,3-diene	82mg/kg(Rat)	100mg/kg(Rabbit)	No information available
1,2,4-trimethylbenzene	5000mg/kg(Rat)	No information available	18mg/L(Rat)
Acetone	5800mg/kg(Rat)	> 15800mg/kg(Rabbit)	76mg/L(Rat)
Iodomethane	76mg/kg(Rat)	No information available	1.3mg/L(Rat)
1,1-dichloroethylene	200mg/kg(Rat)	No information available	25.177mg/L(Rat)
sec-butylbenzene	1930mg/kg(Rat)	> 13800mg/kg(Rabbit)	No information available
p-cymene	4750mg/kg(Rat)	No information available	No information available
1,1,2-trichloroethane	836mg/kg(Rat)	5350mg/kg(Rabbit)	No information available
Bromobenzene	2383mg/kg(Rat)	No information available	No information available
Benzene	930mg/kg(Rat)	> 8260mg/kg(Rabbit)	No information available
Naphthalene	490mg/kg(Rat)	> 20000mg/kg(Rabbit)	No information available
Carbon tetrachloride	2350mg/kg(Rat)	> 20000mg/kg(Rabbit)	50.330mg/L(Rat)
trans-dichloroethylene	1235mg/kg(Rat)	> 5000mg/kg(Rabbit)	No information available
Butanone	2737mg/kg(Rat)	6480mg/kg(Rabbit)	32mg/L(Mouse)
Cumene	1400mg/kg(Rat)	10600mg/kg(Rabbit)	No information available
p-xylene	5000mg/kg(Rat)	No information available	19.758mg/L(Rat)
Carbon disulphide	1200mg/kg(Rat)	No information available	No information available
1,1,2-trichloropropane	1230mg/kg(Rat)	No information available	12.060mg/L(Rat)
1,2-dichloropropane	1947mg/kg(Rat)	10100mg/kg(Rabbit)	No information available
Dibromochloromethane	370mg/kg(Rat)	No information available	No information available
4-methylpentan-2-one	2080mg/kg(Rat)	No information available	11mg/L(Rat)
1,2,3-trichlorobenzene	1830mg/kg(Rat)	No information available	No information available
2-chlorotoluene	3900mg/kg(Rat)	No information available	No information available
Styrene	2650mg/kg(Rat)	No information available	12mg/L(Rat)
1,2-dichlorobenzene	500mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available
Dichloromethane	1600mg/kg(Rat)	No information available	No information available
Propylbenzene	6040mg/kg(Rat)	No information available	No information available
1,1,1,2-tetrachloroethane	670mg/kg(Rat)	20000mg/kg(Rabbit)	14.417mg/L(Rat)
Trichloroethylene	4920mg/kg(Rat)	> 20000mg/kg(Rabbit)	45.409mg/L(Mouse)
tert-butylbenzene	3045mg/kg(Rat)	No information available	No information available
Toluene	636mg/kg(Rat)	12200mg/kg(Rabbit)	49mg/L(Rat)
Ethylbenzene	3500mg/kg(Rat)	15400mg/kg(Rabbit)	No information available
1,2-dichloroethane	670mg/kg(Rat)	2800mg/kg(Rabbit)	No information available
Bromoform	933mg/kg(Rat)	No information available	No information available
1,2,3-trichloropropane	150mg/kg(Rat)	516mg/kg(Rabbit)	No information available

1,1-dichloroethane	725mg/kg(Rat)	No information available	52.617mg/L(Rat)

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
1,1-dichloroethylene	Category 2B	Not Listed
Acetone	Not Listed	Not Listed
Iodomethane	Category 3	Not Listed
Carbon disulphide	Not Listed	Not Listed
Dichloromethane	Category 2A	Category R
trans-dichloroethylene	Not Listed	Not Listed
1,1-dichloroethane	Not Listed	Not Listed
2,2-dichloropropane	Not Listed	Not Listed
cis-dichloroethylene	Not Listed	Not Listed
Butanone	Not Listed	Not Listed
Bromochloromethane	Not Listed	Not Listed
Chloroform	Category 2B	Category R
1,1,1-trichloroethane	Category 2A	Not Listed
Carbon tetrachloride	Category 2B	Category R
1,1-dichloropropene	Not Listed	Not Listed
Benzene	Category 1	Category K
1,2-dichloroethane	Category 2B	Category R
Trichloroethylene	Category 1	Category K
1,2-dichloropropane	Category 1	Not Listed
Dibromomethane	Not Listed	Not Listed
bromodichloromethane	Category 2B	Category R
4-methylpentan-2-one	Category 2B	Not Listed
Toluene	Category 3	Not Listed
1,1,2-trichloroethane	Category 3	Not Listed
Tetrachloroethylene	Category 2A	Category R
1,3-dichloropropane	Not Listed	Not Listed
Hexan-2-one	Not Listed	Not Listed
Dibromochloromethane	Category 3	Not Listed
1,2-dibromoethane	Category 2A(Remark 1)	Category R
Chlorobenzene	Not Listed	Not Listed
1,1,1,2-tetrachloroethane	Category 2B	Not Listed
Ethylbenzene	Category 2B	Not Listed

1,1,2-trichloropropane	Not Listed	Not Listed
m-xylene	Not Listed	Not Listed
p-xylene	Not Listed	Not Listed
o-xylene	Not Listed	Not Listed
Styrene	Category 2A	Category R
Bromoform	Category 3	Not Listed
Cumene	Category 2B	Category R
Bromobenzene	Not Listed	Not Listed
1,1,2,2-tetrachloroethane	Category 2B	Not Listed
1,2,3-trichloropropane	Category 2A	Category R
Propylbenzene	Not Listed	Not Listed
2-chlorotoluene	Not Listed	Not Listed
Mesitylene	Not Listed	Not Listed
4-chlorotoluene	Not Listed	Not Listed
tert-butylbenzene	Not Listed	Not Listed
1,2,4-trimethylbenzene	Not Listed	Not Listed
sec-butylbenzene	Not Listed	Not Listed
1,3-dichlorobenzene	Category 3	Not Listed
p-cymene	Not Listed	Not Listed
1,4-dichlorobenzene	Category 2B	Category R
n-Butylbenzene	Not Listed	Not Listed
1,2-dichlorobenzene	Category 3	Not Listed
1,2-dibromo-3-chloropropane	Category 2B	Category R
1,2,4-trichlorobenzene	Not Listed	Not Listed
Naphthalene	Category 2B	Category R
1,2,3-trichlorobenzene	Not Listed	Not Listed
Hexachlorobuta-1,3-diene	Category 3	Not Listed
Methanol	Not Listed	Not Listed

Remark 1: Overall evaluation upgraded to Group 2A with supporting evidence from other relevant data

Others

59 Mix VOCs in methanol	
Skin corrosion/irritation	Causes mild skin irritation(Category 3)
Serious eye damage/irritation	Based on available data, the classification criteria are not met
Skin sensitization	May cause an allergic skin reaction(Category 1)
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	May damage fertility(Category 1)
STOT-single exposure	Causes damage to organs(Category 1)

STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	May cause genetic defects(Category 1B)

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
1,3-dichlorobenzene	LC_{50}：7.8mg/L (96h)(Fish)	EC_{50}：2.5mg/L (48h)(Crustaceans)	ErC_{50}：126mg/L (96h)(Algae)
1,2,4-trichlorobenzene	LC_{50}：2.4mg/L (96h)(Fish)	EC_{50}：2.05mg/L (48h)(Crustaceans)	ErC_{50}：5.7mg/L (72h)(Algae)
Methanol	LC_{50}：24000mg/L (96h)(Fish)	EC_{50}：24500mg/L (48h)(Crustaceans)	No information available
Tetrachloroethylene	LC_{50}：14mg/L (96h)(Fish)	EC_{50}：1.3mg/L (48h)(Crustaceans)	ErC_{50}：27mg/L (72h)(Algae)
Chloroform	LC_{50}：＞110mg/L (96h)(Fish)	No information available	No information available
1,4-dichlorobenzene	LC_{50}：2.2mg/L (96h)(Fish)	EC_{50}：2.5mg/L (48h)(Crustaceans)	ErC_{50}：5.4mg/L (72h)(Algae)
Dibromomethane	LC_{50}：45mg/L (96h)(Fish)	No information available	No information available
bromodichloromethane	LC_{50}：28mg/L (96h)(Fish)	EC_{50}：29mg/L (48h)(Crustaceans)	ErC_{50}：12mg/L (72h)(Algae)
1,1,1-trichloroethane	LC_{50}：42.3mg/L (96h)(Fish)	EC_{50}：11.2mg/L (48h)(Crustaceans)	No information available
Hexan-2-one	LC_{50}：428mg/L (96h)(Fish)	No information available	No information available
Mesitylene	LC_{50}：12.52mg/L (96h)(Fish)	No information available	No information available
Chlorobenzene	LC_{50}：6.6mg/L (96h)(Fish)	EC_{50}：5.29mg/L (48h)(Crustaceans)	ErC_{50}：202mg/L (96h)(Algae)
Bromochloromethane	LC_{50}：360.048mg/L (96h)(Fish)	No information available	No information available
m-xylene	LC_{50}：10.6mg/L (96h)(Fish)	EC_{50}：2.4mg/L (48h)(Crustaceans)	ErC_{50}：8.9mg/L (72h)(Algae)
1,1,2,2-tetrachloroethane	LC_{50}：20.4mg/L (96h)(Fish)	EC_{50}：24mg/L (48h)(Crustaceans)	ErC_{50}：89mg/L (96h)(Algae)
4-chlorotoluene	LC_{50}：5.92mg/L (96h)(Fish)	EC_{50}：2.0mg/L (48h)(Crustaceans)	ErC_{50}：6.1mg/L (72h)(Algae)
1,2-dibromo-3-chloropropane	LC_{50}：39mg/L (96h)(Fish)	EC_{50}：19mg/L (48h)(Crustaceans)	ErC_{50}：62mg/L (72h)(Algae)
1,2-dibromoethane	LC_{50}：1.13mg/L (96h)(Fish)	No information available	No information available
Hexachlorobuta-1,3-diene	LC_{50}：0.32mg/L (96h)(Fish)	No information available	No information available
1,2,4-trimethylbenzene	LC_{50}：7.72mg/L (96h)(Fish)	No information available	No information available
Acetone	LC_{50}：5540mg/L (96h)(Fish)	EC_{50}：18500mg/L (48h)(Crustaceans)	ErC_{50}：7200mg/L (96h)(Algae)

Iodomethane	LC_{50}：1.4mg/L (96h)(Fish)	EC_{50}：0.57mg/L (48h)(Crustaceans)	ErC_{50}：1.69mg/L (72h)(Algae)
1,1-dichloroethylene	LC_{50}：45mg/L (96h)(Fish)	EC_{50}：16mg/L (48h)(Crustaceans)	ErC_{50}：410mg/L (96h)(Algae)
o-xylene	LC_{50}：16.1mg/L (96h)(Fish)	EC_{50}：1.1mg/L (48h)(Crustaceans)	ErC_{50}：0.80mg/L (72h)(Algae)
p-cymene	LC_{50}：2.0mg/L (96h)(Fish)	EC_{50}：3.7mg/L (48h)(Crustaceans)	ErC_{50}：5.8mg/L (72h)(Algae)
1,1,2-trichloroethane	LC_{50}：40mg/L (96h)(Fish)	EC_{50}：79.5mg/L (48h)(Crustaceans)	ErC_{50}：200mg/L (96h)(Algae)
Bromobenzene	LC_{50}：4.3mg/L (96h)(Fish)	EC_{50}：15.7mg/L (48h)(Crustaceans)	ErC_{50}：12mg/L (72h)(Algae)
Benzene	LC_{50}：21.6mg/L (96h)(Fish)	EC_{50}：10.9mg/L (48h)(Crustaceans)	ErC_{50}：1600mg/L (96h)(Algae)
Naphthalene	LC_{50}：0.9mg/L (96h)(Fish)	EC_{50}：3.6mg/L (48h)(Crustaceans)	No information available
Carbon tetrachloride	LC_{50}：7.6mg/L (96h)(Fish)	EC_{50}：8.1mg/L (48h)(Crustaceans)	ErC_{50}：0.46mg/L (72h)(Algae)
1,3-dichloropropane	LC_{50}：124~137mg/L (96h)(Fish)	No information available	ErC_{50}：50mg/L (96h)(Algae)
trans-dichloroethylene	LC_{50}：135mg/L (96h)(Fish)	No information available	No information available
Butanone	LC_{50}：3220mg/L (96h)(Fish)	EC_{50}：5090mg/L (48h)(Crustaceans)	ErC_{50}：>1200mg/L (72h)(Algae)
Cumene	LC_{50}：4.8mg/L (96h)(Fish)	EC_{50}：10.6mg/L (48h)(Crustaceans)	No information available
p-xylene	LC_{50}：5.5mg/L (96h)(Fish)	EC_{50}：6.9mg/L (48h)(Crustaceans)	ErC_{50}：9.6mg/L (72h)(Algae)
Carbon disulphide	LC_{50}：3mg/L (96h)(Fish)	No information available	ErC_{50}：21mg/L (96h)(Algae)
1,2-dichloropropane	LC_{50}：160mg/L (96h)(Fish)	EC_{50}：30mg/L (48h)(Crustaceans)	ErC_{50}：83mg/L (96h)(Algae)
cis-dichloroethylene	LC_{50}：67mg/L (96h)(Fish)	EC_{50}：40mg/L (48h)(Crustaceans)	ErC_{50}：>74mg/L (72h)(Algae)
Dibromochloromethane	LC_{50}：79mg/L (96h)(Fish)	EC_{50}：27mg/L (48h)(Crustaceans)	ErC_{50}：9.6mg/L (72h)(Algae)
4-methylpentan-2-one	LC_{50}：179mg/L (96h)(Fish)	No information available	No information available
1,2,3-trichlorobenzene	LC_{50}：3.2mg/L (96h)(Fish)	EC_{50}：0.46mg/L (48h)(Crustaceans)	ErC_{50}：0.9mg/L (96h)(Algae)
2-chlorotoluene	LC_{50}：7.8mg/L (96h)(Fish)	EC_{50}：0.7mg/L (48h)(Crustaceans)	ErC_{50}：7.8mg/L (72h)(Algae)
Styrene	LC_{50}：4.02mg/L (96h)(Fish)	EC_{50}：4.7mg/L (48h)(Crustaceans)	ErC_{50}：0.72mg/L (96h)(Algae)
1,2-dichlorobenzene	LC_{50}：6.66mg/L (96h)(Fish)	EC_{50}：0.7mg/L (48h)(Crustaceans)	ErC_{50}：71.1mg/L (96h)(Algae)
Dichloromethane	LC_{50}：193mg/L (96h)(Fish)	EC_{50}：1470mg/L (48h)(Crustaceans)	No information available
Propylbenzene	LC_{50}：1.55mg/L (96h)(Fish)	No information available	No information available
1,1,1,2-tetrachloroethane	LC_{50}：20mg/L (96h)(Fish)	No information available	No information available

Trichloroethylene	LC_{50}：42.4mg/L (96h)(Fish)	EC_{50}：11mg/L (48h)(Crustaceans)	ErC_{50}：77mg/L (72h)(Algae)
tert-butylbenzene	No information available	EC_{50}：> 100mg/L (48h)(Crustaceans)	ErC_{50}：290.44mg/L (72h)(Algae)
Toluene	LC_{50}：25mg/L (96h)(Fish)	EC_{50}：4.1mg/L (48h)(Crustaceans)	ErC_{50}：29mg/L (72h)(Algae)
Ethylbenzene	LC_{50}：4.2mg/L (96h)(Fish)	EC_{50}：4.75mg/L (48h)(Crustaceans)	ErC_{50}：3.6mg/L (96h)(Algae)
1,2-dichloroethane	LC_{50}：136mg/L (96h)(Fish)	EC_{50}：99mg/L (48h)(Crustaceans)	ErC_{50}：230mg/L (72h)(Algae)
n-Butylbenzene	LC_{50}：3.3mg/L (96h)(Fish)	EC_{50}：1.0mg/L (48h)(Crustaceans)	ErC_{50}：1.6mg/L (72h)(Algae)
Bromoform	LC_{50}：29mg/L (96h)(Fish)	EC_{50}：46mg/L (48h)(Crustaceans)	ErC_{50}：13mg/L (72h)(Algae)
1,2,3-trichloropropane	LC_{50}：41.6mg/L (96h)(Fish)	EC_{50}：4.1mg/L (48h)(Crustaceans)	ErC_{50}：101mg/L (72h)(Algae)
1,1-dichloroethane	LC_{50}：>110mg/L (96h)(Fish)	EC_{50}：34mg/L (48h)(Crustaceans)	ErC_{50}：>94mg/L (72h)(Algae)

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
1,3-dichlorobenzene	NOEC：0.7mg/L(Fish)	NOEC：<0.10mg/L(Crustaceans)	NOEC：2.2mg/L(Algae)
1,2,4-trichlorobenzene	NOEC：0.04mg/L(Fish)	NOEC：0.10mg/L(Crustaceans)	NOEC：2.2mg/L(Algae)
Tetrachloroethylene	NOEC：1.9mg/L(Fish)	NOEC：0.023mg/L(Crustaceans)	NOEC：9.1mg/L(Algae)
1,4-dichlorobenzene	NOEC：0.9mg/L(Fish)	NOEC：0.10mg/L(Crustaceans)	NOEC：0.83mg/L(Algae)
Butanone	No information available	NOEC：100mg/L(Crustaceans)	NOEC：93mg/L(Algae)
bromodichloromethane	NOEC：0.78mg/L(Fish)	NOEC：2.2mg/L(Crustaceans)	NOEC：0.80mg/L(Algae)
p-xylene	No information available	NOEC：1.3mg/L(Crustaceans)	NOEC：4.4mg/L(Algae)
1,2-dichloropropane	NOEC：6~11mg/L(Fish)	NOEC：0.96mg/L(Crustaceans)	NOEC：11mg/L(Algae)
cis-dichloroethylene	No information available	NOEC：4.5mg/L(Crustaceans)	NOEC：74mg/L(Algae)
Dibromochloromethane	NOEC：3.2mg/L(Fish)	NOEC：0.063mg/L(Crustaceans)	NOEC：4.5mg/L(Algae)
Chlorobenzene	No information available	NOEC：0.72mg/L(Crustaceans)	No information available
m-xylene	No information available	NOEC：0.41mg/L(Crustaceans)	NOEC：5.3mg/L(Algae)
4-chlorotoluene	No information available	NOEC：0.32mg/L(Crustaceans)	NOEC：2.2mg/L(Algae)
1,2-dibromo-3-chloropropane	No information available	NOEC：5.0mg/L(Crustaceans)	NOEC：2.7mg/L(Algae)

1,2,3-trichlorobenzene	NOEC : 0.32mg/L(Fish)	NOEC : 0.17mg/L(Crustaceans)	NOEC : 0.23mg/L(Algae)
2-chlorotoluene	No information available	NOEC : 0.31mg/L(Crustaceans)	NOEC : 2.6mg/L(Algae)
o-xylene	No information available	NOEC : 0.63mg/L(Crustaceans)	NOEC : 0.73mg/L(Algae)
1,2-dichlorobenzene	NOEC : 0.8mg/L(Fish)	NOEC : <0.10mg/L(Crustaceans)	NOEC : 2.6mg/L(Algae)
Trichloroethylene	NOEC : 5.76mg/L(Fish)	NOEC : 2.1mg/L(Crustaceans)	NOEC : 45mg/L(Algae)
p-cymene	No information available	NOEC : 0.46mg/L(Crustaceans)	NOEC : 0.48mg/L(Algae)
Toluene	No information available	NOEC : 1.2mg/L(Crustaceans)	NOEC : 9.1mg/L(Algae)
Bromobenzene	No information available	No information available	NOEC : 4.9mg/L(Algae)
1,2-dichloroethane	NOEC : 41mg/L(Fish)	NOEC : 1.0mg/L(Crustaceans)	NOEC : 55mg/L(Algae)
n-Butylbenzene	No information available	NOEC : 0.17mg/L(Crustaceans)	NOEC : 0.42mg/L(Algae)
Carbon tetrachloride	No information available	NOEC : 0.49mg/L(Crustaceans)	NOEC : 0.12mg/L(Algae)
1,2,3-trichloropropane	NOEC : 4.4mg/L(Fish)	No information available	No information available
1,1-dichloroethane	No information available	NOEC : 0.53mg/L(Crustaceans)	NOEC : 94mg/L(Algae)

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Iodomethane	Low(Half-life = 56 days)	High(Half-life = 222.83 days)
trans-dichloroethylene	High	High
cis-dichloroethylene	High	High
Butanone	Low(Half-life = 14 days)	Low(Half-life = 26.75 days)
1,1,1-trichloroethane	High(Half-life = 546 days)	High(Half-life = 2247.04 days)
Dibromomethane	High(Half-life = 560.17 days)	High(Half-life = 354.58 days)
1,1,2-trichloroethane	High(Half-life = 730 days)	Medium(Half-life = 81.5 days)
Tetrachloroethylene	High(Half-life = 720 days)	Medium(Half-life = 160.13 days)
1,3-dichloropropane	High	High
Hexan-2-one	Low	Low
m-xylene	High(Half-life = 360 days)	Low(Half-life = 1.08 days)
p-xylene	High(Half-life = 360 days)	Low(Half-life = 1.75 days)
o-xylene	High(Half-life = 360 days)	Low(Half-life = 1.83 days)
Bromoform	High(Half-life = 360 days)	High(Half-life = 541.21 days)
Bromobenzene	High	High
1,2,3-trichloropropane	High(Half-life = 720 days)	Low(Half-life = 25.54 days)

2-chlorotoluene	High	High
4-chlorotoluene	High	High
tert-butylbenzene	High	High
1,2,4-trimethylbenzene	Low(Half-life = 56 days)	Low(Half-life = 0.67 days)
sec-butylbenzene	High	High
1,3-dichlorobenzene	High(Half-life = 360 days)	Low(Half-life = 37.13 days)
p-cymene	High	High
n-Butylbenzene	High	High
1,2-dichlorobenzene	High(Half-life = 360 days)	Medium(Half-life = 63.67 days)
1,2-dibromo-3-chloropropane	High(Half-life = 360 days)	Medium(Half-life = 60.79 days)
1,2,4-trichlorobenzene	High(Half-life = 360 days)	Low(Half-life = 53.5 days)
Naphthalene	High(Half-life = 258 days)	Low(Half-life = 1.23 days)
1,2,3-trichlorobenzene	High	High
Methanol	Low	Low

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Iodomethane	Low	Log Kow=1.51-1.69
trans-dichloroethylene	Low	Log Kow=2.09
cis-dichloroethylene	Low	Log Kow=1.9808
Butanone	Low	Log Kow=0.29
1,1,1-trichloroethane	Low	BCF=9
Dibromomethane	Low	Log Kow=1.7
1,1,2-trichloroethane	Low	BCF=17
Tetrachloroethylene	Low	BCF=77.1
1,3-dichloropropane	Low	Log Kow=2.0
Hexan-2-one	Low	Log Kow=1.38
m-xylene	Low	BCF=1.37
p-xylene	Low	BCF=2.2
o-xylene	Low	BCF=219
Bromoform	Low	BCF=21
Bromobenzene	Low	BCF=34
1,2,3-trichloropropane	Low	BCF=9
2-chlorotoluene	Low	BCF=112
4-chlorotoluene	Low	BCF=101.6
tert-butylbenzene	Medium	Log Kow=4.11

1,2,4-trimethylbenzene	Low	BCF=275
sec-butylbenzene	High	Log Kow=4.57
1,3-dichlorobenzene	High	BCF=6918
p-cymene	Medium	Log Kow=4.1
n-Butylbenzene	Medium	Log Kow=4.38
1,2-dichlorobenzene	Low	BCF=260
1,2-dibromo-3-chloropropane	Low	Log Kow=2.96
1,2,4-trichlorobenzene	High	BCF=4420
Naphthalene	High	BCF=18000
1,2,3-trichlorobenzene	Medium	Log Kow=4.05
Methanol	Low	BCF=10

Mobility in soil

Component	log Koc	Remark
1,1-dichloroethylene	1.72	20 ℃
Iodomethane	1.53908	
Carbon disulphide	1.53	20 ℃
Dichloromethane	1.67	20 ℃
trans-dichloroethylene	1.641	
cis-dichloroethylene	1.641	
Butanone	0.654	25 ℃
Bromochloromethane	1.34	20 ℃
Chloroform	2.27	20 ℃
1,1,1-trichloroethane	0.34	20 ℃
Carbon tetrachloride	2.06	20 ℃
Benzene	2.13	20 ℃
Trichloroethylene	2.15	
1,2-dichloropropane	1.67	
Dibromomethane	1.48	20 ℃
Toluene	2.31	20 ℃
1,1,2-trichloroethane	1.831	
Tetrachloroethylene	2.15	20 ℃
1,3-dichloropropane	1.907	
Hexan-2-one	1.115	
Chlorobenzene	2.369	MCI method
Ethylbenzene	3.12	20 ℃

m-xylene	2.73	20 ℃
p-xylene	2.73	20 ℃
o-xylene	2.73	20 ℃
Styrene	2.55	
Bromoform	2.08	
Cumene	2.95	20 ℃
Bromobenzene	2.428	
1,2,3-trichloropropane	1.89	20 ℃
2-chlorotoluene	2.54	20 ℃
Mesitylene	2.87	
4-chlorotoluene	2.637	
tert-butylbenzene	2.888	25 ℃， pH=6.0
1,2,4-trimethylbenzene	3.04	20 ℃
sec-butylbenzene	3.198	
1,3-dichlorobenzene	2.5	
p-cymene	3.61	20 ℃
n-Butylbenzene	3.246	
1,2-dichlorobenzene	2.65	20 ℃
1,2-dibromo-3-chloropropane	2.117	
1,2,4-trichlorobenzene	2.856	
Naphthalene	2.58	20 ℃
1,2,3-trichlorobenzene	2.87	
Methanol	0.000	

Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
1,1-dichloroethylene	Not PBT/vPvB
Acetone	Not PBT/vPvB
Iodomethane	Not PBT/vPvB
Carbon disulphide	Not PBT/vPvB
Dichloromethane	Not PBT/vPvB
trans-dichloroethylene	Not PBT/vPvB
1,1-dichloroethane	Insufficient information, temporarily unable to evaluate
2,2-dichloropropane	Insufficient information, temporarily unable to evaluate
cis-dichloroethylene	Insufficient information, temporarily unable to evaluate
Butanone	Not PBT/vPvB

Bromochloromethane	Insufficient information, temporarily unable to evaluate
Chloroform	Not PBT/vPvB
1,1,1-trichloroethane	Insufficient information, temporarily unable to evaluate
Carbon tetrachloride	Not PBT/vPvB
1,1-dichloropropene	Insufficient information, temporarily unable to evaluate
Benzene	Not PBT/vPvB
1,2-dichloroethane	Not PBT/vPvB
Trichloroethylene	Not PBT/vPvB
1,2-dichloropropane	Not PBT/vPvB
Dibromomethane	Insufficient information, temporarily unable to evaluate
bromodichloromethane	Insufficient information, temporarily unable to evaluate
4-methylpentan-2-one	Not PBT/vPvB
Toluene	Not PBT/vPvB
1,1,2-trichloroethane	Insufficient information, temporarily unable to evaluate
Tetrachloroethylene	Not PBT/vPvB
1,3-dichloropropane	Insufficient information, temporarily unable to evaluate
Hexan-2-one	Insufficient information, temporarily unable to evaluate
Dibromochloromethane	Insufficient information, temporarily unable to evaluate
1,2-dibromoethane	Not PBT/vPvB
Chlorobenzene	Not PBT/vPvB
1,1,1,2-tetrachloroethane	Insufficient information, temporarily unable to evaluate
Ethylbenzene	Not PBT/vPvB
1,1,2-trichloropropane	Insufficient information, temporarily unable to evaluate
m-xylene	Not PBT/vPvB
p-xylene	Not PBT/vPvB
o-xylene	Not PBT/vPvB
Styrene	Not PBT/vPvB
Bromoform	Not PBT/vPvB
Cumene	Not PBT/vPvB
Bromobenzene	Insufficient information, temporarily unable to evaluate
1,1,2,2-tetrachloroethane	Insufficient information, temporarily unable to evaluate
1,2,3-trichloropropane	Not PBT/vPvB
Propylbenzene	Insufficient information, temporarily unable to evaluate
2-chlorotoluene	Not PBT/vPvB
Mesitylene	Not PBT/vPvB
4-chlorotoluene	Not PBT/vPvB

tert-butylbenzene	Not PBT/vPvB
1,2,4-trimethylbenzene	Not PBT/vPvB
sec-butylbenzene	Insufficient information, temporarily unable to evaluate
1,3-dichlorobenzene	Not PBT/vPvB
p-cymene	Not PBT/vPvB
1,4-dichlorobenzene	Not PBT/vPvB
n-Butylbenzene	Insufficient information, temporarily unable to evaluate
1,2-dichlorobenzene	Not PBT/vPvB
1,2-dibromo-3-chloropropane	Insufficient information, temporarily unable to evaluate
1,2,4-trichlorobenzene	Insufficient information, temporarily unable to evaluate
Naphthalene	Not PBT/vPvB
1,2,3-trichlorobenzene	Insufficient information, temporarily unable to evaluate
Hexachlorobuta-1,3-diene	Insufficient information, temporarily unable to evaluate
Methanol	Not PBT/vPvB

13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	

IMDG-CODE

UN number	1230
UN proper shipping name	METHANOL
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	Ⅱ
Marine pollutant (Yes or no)	No

IATA-DGR

UN number	1230
UN proper shipping name	METHANOL
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	Ⅱ

JT/T 617-2018

UN number	1230
UN proper shipping name	METHANOL
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	Ⅱ

Others

Precautions for transport	Transit should be anti-exposure, rain, high temperature. Strictly prohibited shipping or transportation with acids, alkalis, oxidants, food and food additives etc. Shipment of the goods vehicle exhaust pipe must be equipped with fire retardant devices, prohibit using mechanical equipment and tools of which easy to produce sparks. Transit should be anti-exposure, anti-rain, anti-high temperature. Transportation used tank (tank) cars should be grounded chain, tank can be installed to reduce the partition hole static electricity shocks. Strictly prohibited shipping or transportation with oxidants, acids, food and food additives etc. When bulk transport, Prohibit the use of cement or wooden boats. Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing. The transport unit must be placarded and marked in accordance with relevant transporting requirements.

15 Regulatory information

International chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
1,1-dichloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
Acetone	√	√	√	√	√	√	√	√	√	√	√	√	√
Iodomethane	√	√	√	√	√	√	√	√	√	×	√	√	√
Carbon disulphide	√	√	√	√	√	√	√	√	√	√	√	√	√
Dichloromethane	√	√	√	√	√	√	√	√	√	√	√	√	√
trans-dichloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1-dichloroethane	√	√	√	×	√	√	√	√	√	√	√	√	√
2,2-dichloropropane	×	√	√	√	×	×	×	√	×	×	√	√	√
cis-dichloroethylene	√	√	√	×	√	×	√	√	√	×	×	√	√
Butanone	√	√	√	√	√	√	√	√	√	√	√	√	√

Bromochloromethane	√	√	√	√	√	√	√	√	√	×	√	√	√
Chloroform	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1,1-trichloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
Carbon tetrachloride	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1-dichloropropene	×	√	×	×	×	×	×	×	×	×	×	√	√
Benzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2-dichloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
Trichloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2-dichloropropane	√	√	√	√	√	√	√	√	√	√	√	√	√
Dibromomethane	√	√	√	√	√	√	√	√	√	×	√	√	√
bromodichloromethane	×	√	√	×	√	×	×	×	×	×	√	√	√
4-methylpentan-2-one	√	√	√	√	√	√	√	√	√	√	√	√	√
Toluene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1,2-trichloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
Tetrachloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,3-dichloropropane	√	√	√	×	√	√	×	√	√	×	√	√	√
Hexan-2-one	√	√	√	√	√	√	√	√	√	×	√	√	√
Dibromochloromethane	×	√	√	×	×	×	×	×	×	×	√	√	√
1,2-dibromoethane	√	√	√	√	√	√	√	√	√	×	√	√	√
Chlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1,1,2-tetrachloroethane	×	√	√	√	×	×	×	√	√	×	√	√	√
Ethylbenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1,2-trichloropropane	×	√	√	×	×	×	×	×	√	×	×	√	√
m-xylene	√	√	√	√	√	√	√	√	√	√	√	√	√
p-xylene	√	√	√	√	√	√	√	√	√	√	√	√	√
o-xylene	√	√	√	√	√	√	√	√	√	√	√	√	√
Styrene	√	√	√	√	√	√	√	√	√	√	√	√	√
Bromoform	√	√	√	√	√	√	√	√	√	√	√	√	√
Cumene	√	√	√	√	√	√	√	√	√	√	√	√	√
Bromobenzene	√	√	√	√	√	√	√	√	√	×	√	√	√
1,1,2,2-tetrachloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2,3-trichloropropane	√	√	√	√	√	√	√	√	√	×	√	√	√
Propylbenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
2-chlorotoluene	√	√	√	√	√	√	√	√	√	×	√	√	√
Mesitylene	√	√	√	√	√	√	√	√	√	√	√	√	√
4-chlorotoluene	√	√	√	×	√	√	√	√	√	×	×	√	√

tert-butylbenzene	√	√	√	√	√	√	×	√	√	√	√	√	√
1,2,4-trimethylbenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
sec-butylbenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,3-dichlorobenzene	√	√	√	√	√	√	√	√	√	×	√	√	√
p-cymene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,4-dichlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
n-Butylbenzene	√	√	√	√	√	√	×	√	√	×	√	√	√
1,2-dichlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2-dibromo-3-chloropropane	√	√	√	×	×	√	√	×	√	×	√	√	√
1,2,4-trichlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
Naphthalene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2,3-trichlorobenzene	√	√	√	√	√	√	√	√	√	√	×	√	√
Hexachlorobuta-1,3-diene	√	√	√	√	×	√	√	√	√	×	√	√	√
Methanol	√	√	√	√	√	√	√	√	√	√	√	√	√

【A】 China Inventory of Existing Chemical Substances(IECSC)
【B】 European Inventory of Existing Commercial Chemical Substances(EC inventory)
【C】 United States Toxic Substances Control Act Inventory(TSCA)
【D】 Canadian Domestic Substances List(DSL)
【E】 New Zealand Inventory of Chemicals(NZIoC)
【F】 Philippines Inventory of Chemicals and Chemical Substances(PICCS)
【G】 Korea Existing Chemicals Inventory(KECL)
【H】 Australian. Inventory of Industrial Chemical (AIICS)
【I】 Japan Inventory of Existing & New Chemical Substances(ENCS)
【J】 Thailand Existing Chemicals Inventory(TECI)
【K】 Mexico National Inventory of Chemical Substances (INSQ)
【L】 Russia Inventory of Existing Substances (DRAFT)
【M】 Inventory of Existing Chemical Substances in Taiwan, China (TCSI)

List of Chemical Substances under International Conventions

Component	A	B	C
1,1-dichloroethylene	×	×	×
Acetone	×	×	×
Iodomethane	×	×	×
Carbon disulphide	×	×	×
Dichloromethane	×	×	×
trans-dichloroethylene	×	×	×
1,1-dichloroethane	×	×	×
2,2-dichloropropane	×	×	×
cis-dichloroethylene	×	×	×
Butanone	×	×	×
Bromochloromethane	√	×	×

Chloroform	×	×	×
1,1,1-trichloroethane	√	×	×
Carbon tetrachloride	√	×	×
1,1-dichloropropene	×	×	×
Benzene	×	×	×
1,2-dichloroethane	×	×	√
Trichloroethylene	×	×	×
1,2-dichloropropane	×	×	×
Dibromomethane	×	×	×
bromodichloromethane	×	×	×
4-methylpentan-2-one	×	×	×
Toluene	×	×	×
1,1,2-trichloroethane	×	×	×
Tetrachloroethylene	×	×	×
1,3-dichloropropane	×	×	×
Hexan-2-one	×	×	×
Dibromochloromethane	×	×	×
1,2-dibromoethane	×	×	√
Chlorobenzene	×	×	×
1,1,1,2-tetrachloroethane	×	×	×
Ethylbenzene	×	×	×
1,1,2-trichloropropane	×	×	×
m-xylene	×	×	×
p-xylene	×	×	×
o-xylene	×	×	×
Styrene	×	×	×
Bromoform	×	×	×
Cumene	×	×	×
Bromobenzene	×	×	×
1,1,2,2-tetrachloroethane	×	×	×
1,2,3-trichloropropane	×	×	×
Propylbenzene	×	×	×
2-chlorotoluene	×	×	×
Mesitylene	×	×	×
4-chlorotoluene	×	×	×
tert-butylbenzene	×	×	×

1,2,4-trimethylbenzene	×	×	×
sec-butylbenzene	×	×	×
1,3-dichlorobenzene	×	×	×
p-cymene	×	×	×
1,4-dichlorobenzene	×	×	×
n-Butylbenzene	×	×	×
1,2-dichlorobenzene	×	×	×
1,2-dibromo-3-chloropropane	×	×	×
1,2,4-trichlorobenzene	×	×	×
Naphthalene	×	×	×
1,2,3-trichlorobenzene	×	×	×
Hexachlorobuta-1,3-diene	×	√	×
Methanol	×	×	×

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer
【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)
【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

Chinese chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1,1-dichloroethylene	√	×	×	×	×	×	×	×	√	×	×	×	×	×	×
Acetone	√	×	×	×	×	×	×	×	×	×	×	×	√	√	×
Iodomethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Carbon disulphide	√	×	×	√	×	×	×	√	×	√	×	×	×	×	×
Dichloromethane	√	×	×	×	×	×	√	×	√	×	×	×	×	×	×
trans-dichloroethylene	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,1-dichloroethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
2,2-dichloropropane	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
cis-dichloroethylene	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Butanone	√	×	×	×	×	×	×	×	×	×	×	×	√	√	×
Bromochloromethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Chloroform	√	×	×	√	×	×	√	×	√	×	×	×	√	√	×
1,1,1-trichloroethane	√	×	√	×	×	×	×	×	×	×	×	×	×	×	×
Carbon tetrachloride	√	×	√	×	×	×	×	×	×	×	×	×	×	×	×
1,1-dichloropropene	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Benzene	√	×	×	√	√	×	×	×	√	√	×	×	×	×	×
1,2-dichloroethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Trichloroethylene	√	×	×	×	×	×	√	×	√	×	×	×	×	×	×

1,2-dichloropropane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Dibromomethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
bromodichloromethane	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
4-methylpentan-2-one	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Toluene	√	×	×	√	×	×	×	×	√	×	×	×	√	√	×
1,1,2-trichloroethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Tetrachloroethylene	√	×	×	×	×	×	×	×	√	×	×	×	×	×	×
1,3-dichloropropane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Hexan-2-one	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Dibromochloromethane	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,2-dibromoethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Chlorobenzene	√	×	×	√	×	×	×	×	×	×	×	×	×	×	×
1,1,1,2-tetrachloroethane	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Ethylbenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,1,2-trichloropropane	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
m-xylene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
p-xylene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
o-xylene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Styrene	√	×	×	√	×	×	×	×	×	×	×	×	×	×	×
Bromoform	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Cumene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Bromobenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,1,2,2-tetrachloroethane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,2,3-trichloropropane	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Propylbenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
2-chlorotoluene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Mesitylene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
4-chlorotoluene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
tert-butylbenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,2,4-trimethylbenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
sec-butylbenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,3-dichlorobenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
p-cymene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,4-dichlorobenzene	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
n-Butylbenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,2-dichlorobenzene	√	×	×	×	×	×	×	×	×	×	×	×	×	×	×

1,2-dibromo-3-chloropropane	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
1,2,4-trichlorobenzene	√	×	×	×	√	×	√	×	×	×	×	×	×	×	×
Naphthalene	√	×	×	×	√	×	√	×	×	×	×	×	×	×	×
1,2,3-trichlorobenzene	√	×	×	×	√	×	×	×	×	×	×	×	×	×	×
Hexachlorobuta-1,3-diene	√	×	×	×	√	×	×	×	√	×	×	×	×	×	×
Methanol	√	×	×	√	×	×	×	√	×	×	×	×	×	×	×

【A】 Catalog of Hazardous Chemicals(2015 Edition), Notice 5th 2015, the former China State Administration of Work Safety together with the Ministry of Industry and Information Technology, etc.
【B】 List of Toxic Chemicals Restricted in China, Notice 32nd 2023, the Ministry of Ecology and Environment, Ministry of Commerce, General Administration of Customs.
【C】 List of Ozone Depletion Chemicals Controlled to be Imported/Exported in China（2021）, Decree No. 50 of Ministry of Ecology and environment of PRC in 2021.
【D】 Catalog of Hazardous Chemicals for Priority Management（First and Second batches）, Notice 95th, 2011, Notice 12th 2013, China State Administration of Work Safety.
【E】 Catalog of Hazardous Chemicals for Environmental Management, Notice 33th 2014, The former Ministry of Environmenta Protection.
【F】 List of Various Monitoring Chemicals, 52th 2020, the Ministry of Industry and Information Technology.
【G】 List of Priority Controlled Chemicals (the First batch), 83th 2017, the former Ministry of Environmental Protection, Ministry o Industry and Information Technology, the former National Health And Family Planning Commission.
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【I】 List of Toxic and Hazardous Water Pollutants (First and th Second Batch), Ministry of Ecology and Environment Announcement [2019] No. 28 and [2025] No. 15.
【J】 Catalog of Highly Toxic Chemicals, Notice 142th 2003, the former Ministry of Health of P.R.China.
【K】 Dangerous Chemicals Directory Used to Manufacure Exploder (2017 Edition), Notice 11th May. 2017, Ministry of Public Security of P.R.China.
【L】 Catalogue of Narcotic Drugs and Psychotropic Drugs for Pharmaceutical Use, National Medical Products Administration Announcement No. 55 of 2025.
【M】 Decree No. 445 of the State Council in 2005 and its amendment announcement.
【N】 Catalog of Import and Export Management of Precursor Chemicals, 7th 2006, the Ministry of Commerce.
【O】 International Verification of Precursor Chemicals Management Catalog, 8th 2006, the Ministry of Commerce, Ministry of Public Security.

Note:
"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

16 Other information

Information on revision

Creation Date	2026/01/17
Revision Date	-
Reason for revision	-

Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.
[2] IARC, website: http://www.iarc.fr/.
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/.
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.

[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor		

Disclaimer

This Safety Data Sheet (SDS) was prepared according to GB/T 16483-2008 and GB/T 17519-2013. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.