Safety Data Sheet

21 Mix ketones in carbon disulphide

Version：V2.0.0.1
Report No.：BWQ8480-2016-MSDS-US
Creation Date：2025/10/16
Revision Date：-

*Prepared according to American OSHA HCS-2024 (29 CFR 1910.1200)

1 Identification

Product identifier

Product Name	21 Mix ketones in carbon disulphide
Cat No.	BWQ8480-2016
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

Hazard classification according to 29 CFR 1910.1200

Flammable liquids	Category 2
Acute Toxicity - Dermal	Category 3
Skin Corrosion/Irritation	Category 2
Serious eye damage/irritation	Category 2
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 1B
Specific target organ toxicity - repeated exposure	Category 1

Label elements

Hazard pictograms	
Signal word	Danger

Hazard statements

H225	Highly flammable liquid and vapour
H311	Toxic in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H350	May cause cancer
H360	May damage fertility
H372	Causes damage to organs through prolonged or repeated exposure

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.
P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

P321	Specific treatment (see related instructions on the label).
P302+P352	IF ON SKIN: Wash with plenty of water.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
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 affected areas with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

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

◆ Disposal

P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

Other hazards

	Not applicable.

Hazard description

◆ Physical and chemical hazards

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

◆ Health hazards

Inhaled	Inhalation of the product may produce adverse health effects or irritation of the respiratory tract following discomfort.
Ingestion	(Further see Inhalation).
Skin Contact	MAY BE ABSORBED! Dry skin. Redness. (Further see Inhalation).
Eye	Redness. Pain.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.

3 Composition/information on ingredients

Substance/mixture

	Mixture

Component	CAS No.	EC No.	Concentration (wt, %)
Carbon disulphide	75-15-0	200-843-6	83.662
α-chlorotoluene	100-44-7	202-853-6	0.778
Bromoform	75-25-2	200-854-6	0.778
Carbon tetrachloride	56-23-5	200-262-8	0.778
Chlorobenzene	108-90-7	203-628-5	0.778
1-bromo-2-chloroethane	107-04-0	203-456-0	0.778
Chloroform	67-66-3	200-663-8	0.778
1,2-dichlorobenzene	95-50-1	202-425-9	0.778
1,4-dichlorobenzene	106-46-7	203-400-5	0.778
1,1-dichloroethane	75-34-3	200-863-5	0.778
cis-dichloroethylene	156-59-2	205-859-7	0.778
trans-dichloroethylene	156-60-5	205-860-2	0.778
1,2-dichloroethane	107-06-2	203-458-1	0.778
Hexachloroethane	67-72-1	200-666-4	0.778
1,1,1-trichloroethane	71-55-6	200-756-3	0.778
Tetrachloroethylene	127-18-4	204-825-9	0.778
1,1,2-trichloroethane	79-00-5	201-166-9	0.778

1,2-dichloropropane	78-87-5	201-152-2	0.778
1,3-dichlorobenzene	541-73-1	208-792-1	0.778
Trichloroethylene	79-01-6	201-167-4	0.778
1,1,2,2-tetrachloroethane	79-34-5	201-197-8	0.778
1,2,3-trichloropropane	96-18-4	202-486-1	0.778

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	First rinse with plenty of water, then remove contaminated clothes and rinse again. Refer for medical attention.
Ingestion	Give nothing to drink. Refer for medical attention.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
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/effects, acute and delayed

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

Indication of any immediate medical attention and special treatment needed

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.

Special protective equipment and precautions for fire-fighters

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.

7 Handling and storage

Precautions for safe 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.

Conditions for safe storage, including any incompatibilities

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

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m³	ppm	mg/m³
Carbon disulphide	Japan - JSOH(2024–2025)	1	3.13	-	-
	Permissible exposure standards for workers in the workplace	10	31	15	46.5
	Australia	10	31	-	-
	Canada - Ontario	1	-	-	-
	European Union	5	15	-	-
	New Zealand	1	3	-	-
α-chlorotoluene	Permissible exposure standards for workers in the workplace	1	5.2	2	10.4
	Australia	1	5.2	-	-
	Canada - Ontario	1	-	-	-
	New Zealand	1	5.2	-	-

	USA - ACGIH	1	-	-	-
	USA - NIOSH	-	-	1	5
Bromoform	Japan - JSOH(2024–2025)	1	10.3	-	-
	Permissible exposure standards for workers in the workplace	0.5	5.2	1.5	10.4
	Australia	0.5	5.2	-	-
	Canada - Ontario	0.5	-	-	-
	New Zealand	0.5	5.2	-	-
	USA - ACGIH	0.5	-	-	-
Carbon tetrachloride	Japan - JSOH(2024–2025)	5	31	-	-
	Permissible exposure standards for workers in the workplace	2	13	4	19.5
	Australia	0.1	0.63	-	-
	Canada - Ontario	2	-	3	-
	European Union	1	6.4	5	32
	New Zealand	0.1	0.63	-	-
Chlorobenzene	Japan - JSOH(2024–2025)	10	46	-	-
	Permissible exposure standards for workers in the workplace	75	345	112.5	431.25
	Australia	10	46	-	-
	Canada - Ontario	10	-	-	-
	European Union	5	23	15	70
	New Zealand	10	46	-	-
Chloroform	Japan - JSOH(2024–2025)	3	14.7	-	-
	Permissible exposure standards for workers in the workplace	-	-	-	-
	Australia	2	10	-	-
	Canada - Ontario	10	-	-	-
	European Union	2	10	-	-
	New Zealand	2	9.9	-	-

1,2-dichlorobenzene	Japan - JSOH(2024–2025)	25	150	-	-
	Permissible exposure standards for workers in the workplace	-	-	-	-
	Australia	25	150	50	301
	Canada - Ontario	25	-	50	-
	European Union	20	122	50	306
	New Zealand	10	61	20	122
1,4-dichlorobenzene	Japan - JSOH(2024–2025)	10	60	-	-
	Permissible exposure standards for workers in the workplace	75	450	112.5	562.5
	Australia	25	150	50	300
	Canada - Ontario	10	-	-	-
	European Union	2	12	10	60
	New Zealand	2	12	10	60
1,1-dichloroethane	Japan - JSOH(2024–2025)	100	400	-	-
	Permissible exposure standards for workers in the workplace	100	405	125	506.25
	Australia	100	412	-	-
	Canada - Ontario	100	-	-	-
	European Union	100	412	-	-
	New Zealand	100	405	250	1010
cis-dichloroethylene	Australia	200	793	-	-
	Canada - Ontario	200	790	-	-
	New Zealand	200	793	-	-
	USA - ACGIH	200	-	-	-
	USA - NIOSH	200	790	-	-
	USA - OSHA	200	790	-	-
trans-dichloroethylene	Australia	200	793	-	-
	Canada - Ontario	200	790	-	-
	New Zealand	200	793	-	-
	USA - ACGIH	200	-	-	-
	USA - NIOSH	200	790	-	-

	USA - OSHA	200	790	-	-
1,2-dichloroethane	Japan - JSOH(2024–2025)	10	40	-	-
	Permissible exposure standards for workers in the workplace	10	40	15	60
	Australia	10	40	-	-
	Canada - Ontario	10	-	-	-
	European Union	2	8.2	-	-
	New Zealand	5	21	-	-
Hexachloroethane	Japan - JSOH(2024–2025)	1	9.7	-	-
	Permissible exposure standards for workers in the workplace	1	9.7	2	19.4
	Australia	1	9.7	-	-
	Canada - Ontario	1	-	-	-
	New Zealand	1	9.7	-	-
	USA - ACGIH	1	-	-	-
1,1,1-trichloroethane	Japan - JSOH(2024–2025)	200	1090	-	-
	Permissible exposure standards for workers in the workplace	350	1910	437.5	1910
	Australia	100	555	200	1110
	Canada - Ontario	350	-	450	-
	European Union	100	555	200	1110
	New Zealand	100	555	200	1110
Tetrachloroethylene	Permissible exposure standards for workers in the workplace	50	339	75	423.75
	Australia	50	340	150	1020
	Canada - Ontario	25	-	100	-
	European Union	20	138	40	275
	New Zealand	20	136	40	271
	USA - ACGIH	25	-	100	-
1,1,2-trichloroethane	Japan - JSOH(2024–2025)	10	55	-	-

	Permissible exposure standards for workers in the workplace	10	55	15	82.5
	Australia	10	55	-	-
	Canada - Ontario	10	-	-	-
	New Zealand	10	55	-	-
	USA - ACGIH	10	-	-	-
1,2-dichloropropane	Japan - JSOH(2024–2025)	1	4.6	-	-
	Permissible exposure standards for workers in the workplace	75	347	112.5	433.75
	Australia	75	347	110	508
	Canada - Ontario	10	-	-	-
	New Zealand	5	23	-	-
	USA - ACGIH	10	-	-	-
1,3-dichlorobenzene	Austria	3	20	12	80
	Germany (AGS)	2	12	4	24
	Germany (DFG)	2	12	4	24
	Hungary	-	12	-	24
	Latvia	-	20	-	-
	Switzerland	2	12	4	24
Trichloroethylene	Japan - JSOH(2024–2025)	25	135	-	-
	Permissible exposure standards for workers in the workplace	50	269	75	336.25
	Australia	10	54	40	216
	Canada - Ontario	10	-	25	-
	European Union	10	54.7	30	164.1
	New Zealand	10	55	25	135
1,1,2,2-tetrachloroethane	Japan - JSOH(2024–2025)	1	6.9	-	-
	Permissible exposure standards for workers in the workplace	1	6.9	2	13.8
	Australia	1	6.9	-	-
	Canada - Ontario	1	-	-	-

	New Zealand	1	6.9	-	-
	USA - ACGIH	1	-	-	-
1,2,3-trichloropropane	Permissible exposure standards for workers in the workplace	50	302	75	377.5
	Australia	10	60	-	-
	Canada - Ontario	0.005	-	-	-
	New Zealand	0.005	0.03	-	-
	USA - ACGIH	0.005	-	-	-
	USA - NIOSH	10	60	-	-

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 and safety characteristics

Physical and chemical properties

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	-111 (Carbon disulphide)
Initial boiling point and boiling range(°C)	46 (Carbon disulphide)
Flash point(Closed cup,°C)	-30 (Carbon disulphide)
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit : 50 (Carbon disulphide); Lower limit : 1 (Carbon disulphide)
Vapor pressure	48kPa (25°C,Carbon disulphide)
Vapor density(Air = 1)	2.63 (Carbon disulphide)

Relative density(Water=1)	1.26 (Carbon disulphide)
Solubility	2.9g/L (20 °C,Carbon disulphide)
n-octanol/water partition coefficient	1.84 (Carbon disulphide)
Auto-ignition temperature(°C)	90 (Carbon disulphide)
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available

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	May catch fire spontaneously in the air. Reactions with metals form metal organic coumpounds. In contact with metals, oxidants, triethyl aluminium, amines, boranes and their derivatives may cause an explosion severely.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Nitrate and nitrite, halogens oxyacid salts, potassium permanganate, persulfate, halogen and strong oxidants. Metal, oxidantss and alkali. Borane class and its derivatives, amines, metals, oxidants, triethyl aluminium, calcium and ethylene.
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)
trans-dichloroethylene	1235mg/kg(Rat)	> 5000mg/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-dichlorobenzene	500mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available
1,1-dichloroethane	725mg/kg(Rat)	No information available	52.617mg/L(Rat)
1,2-dichloropropane	1947mg/kg(Rat)	10100mg/kg(Rabbit)	No information available
1,1,2,2-tetrachloroethane	200mg/kg(Rat)	No information available	No information available
1,2,3-trichloropropane	150mg/kg(Rat)	516mg/kg(Rabbit)	No information available
Hexachloroethane	4460mg/kg(Rat)	32000mg/kg(Rabbit)	No information available
Carbon disulphide	1200mg/kg(Rat)	No information available	No information available
1,4-dichlorobenzene	500~5000mg/kg(Rat)	> 2000mg/kg(Rabbit)	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)
1,1,2-trichloroethane	836mg/kg(Rat)	5350mg/kg(Rabbit)	No information available
Carbon tetrachloride	2350mg/kg(Rat)	> 20000mg/kg(Rabbit)	50.330mg/L(Rat)
Trichloroethylene	4920mg/kg(Rat)	> 20000mg/kg(Rabbit)	45.409mg/L(Mouse)

1-bromo-2-chloroethane	64mg/kg(Rat)	No information available	No information available
α-chlorotoluene	1231mg/kg(Rat)	No information available	No information available
Chlorobenzene	1110mg/kg(Rat)	No information available	No information available
1,1,1-trichloroethane	9600mg/kg(Rat)	No information available	98.209mg/L(Rat)

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP	OSHA Carcinogen List
Carbon disulphide	Not Listed	Not Listed	Not Listed
α-chlorotoluene	Category 2A(Remark 1)	Not Listed	Not Listed
Bromoform	Category 3	Not Listed	Not Listed
Carbon tetrachloride	Category 2B	Category R	Not Listed
Chlorobenzene	Not Listed	Not Listed	Not Listed
1-bromo-2-chloroethane	Not Listed	Not Listed	Not Listed
Chloroform	Category 2B	Category R	Not Listed
1,2-dichlorobenzene	Category 3	Not Listed	Not Listed
1,4-dichlorobenzene	Category 2B	Category R	Not Listed
1,1-dichloroethane	Not Listed	Not Listed	Not Listed
cis-dichloroethylene	Not Listed	Not Listed	Not Listed
trans-dichloroethylene	Not Listed	Not Listed	Not Listed
1,2-dichloroethane	Category 2B	Category R	Not Listed
Hexachloroethane	Category 2B	Category R	Not Listed
1,1,1-trichloroethane	Category 2A	Not Listed	Not Listed
Tetrachloroethylene	Category 2A	Category R	Not Listed
1,1,2-trichloroethane	Category 3	Not Listed	Not Listed
1,2-dichloropropane	Category 1	Not Listed	Not Listed
1,3-dichlorobenzene	Category 3	Not Listed	Not Listed
Trichloroethylene	Category 1	Category K	Not Listed
1,1,2,2-tetrachloroethane	Category 2B	Not Listed	Not Listed
1,2,3-trichloropropane	Category 2A	Category R	Not Listed

Remark 1: combined exposures with benzoyl chloride

Others

21 Mix ketones in carbon disulphide	
Skin corrosion/irritation	Causes skin irritation(Category 2)
Serious eye damage/irritation	Causes serious eye irritation(Category 2)
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	May damage fertility(Category 1B)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure(Category 1)

Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
cis-dichloroethylene	LC_{50} : 67mg/L (96h)(Fish)	EC_{50} : 40mg/L (48h)(Crustaceans)	ErC_{50} : >74mg/L (72h)(Algae)
trans-dichloroethylene	LC_{50} :135mg/L (96h)(Fish)	No information available	No information available
1,2-dichloroethane	LC_{50} :136mg/L (96h)(Fish)	EC_{50} : 99mg/L (48h)(Crustaceans)	ErC_{50} : 230mg/L (72h)(Algae)
Bromoform	LC_{50} : 29mg/L (96h)(Fish)	EC_{50} : 46mg/L (48h)(Crustaceans)	ErC_{50} : 13mg/L (72h)(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)
1,1-dichloroethane	LC_{50} : >110mg/L (96h)(Fish)	EC_{50} : 34mg/L (48h)(Crustaceans)	ErC_{50} : >94mg/L (72h)(Algae)
1,2-dichloropropane	LC_{50} :160mg/L (96h)(Fish)	EC_{50} : 30mg/L (48h)(Crustaceans)	ErC_{50} : 83mg/L (96h)(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)
1,2,3-trichloropropane	LC_{50} : 41.6mg/L (96h)(Fish)	EC_{50} : 4.1mg/L (48h)(Crustaceans)	ErC_{50} : 101mg/L (72h)(Algae)
Carbon disulphide	LC_{50} : 3mg/L (96h)(Fish)	No information available	ErC_{50} : 21mg/L (96h)(Algae)
Hexachloroethane	LC_{50} : 1.32mg/L (96h)(Fish)	EC_{50} : 4.3mg/L (48h)(Crustaceans)	ErC_{50} : 90.1mg/L (96h)(Algae)
1,4-dichlorobenzene	LC_{50} : 2.2mg/L (96h)(Fish)	EC_{50} : 2.5mg/L (48h)(Crustaceans)	ErC_{50} : 5.4mg/L (72h)(Algae)
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
1,1,2-trichloroethane	LC_{50} : 40mg/L (96h)(Fish)	EC_{50} : 79.5mg/L (48h)(Crustaceans)	ErC_{50} : 200mg/L (96h)(Algae)
Carbon tetrachloride	LC_{50} : 7.6mg/L (96h)(Fish)	EC_{50} : 8.1mg/L (48h)(Crustaceans)	ErC_{50} : 0.46mg/L (72h)(Algae)
Trichloroethylene	LC_{50} : 42.4mg/L (96h)(Fish)	EC_{50} : 11mg/L (48h)(Crustaceans)	ErC_{50} : 77mg/L (72h)(Algae)
α-chlorotoluene	LC_{50} : 4mg/L (96h)(Fish)	No information available	No information available
1,3-dichlorobenzene	LC_{50} : 7.8mg/L (96h)(Fish)	EC_{50} : 2.5mg/L (48h)(Crustaceans)	ErC_{50} : 126mg/L (96h)(Algae)
Chlorobenzene	LC_{50} : 6.6mg/L (96h)(Fish)	EC_{50} : 5.29mg/L (48h)(Crustaceans)	ErC_{50} : 202mg/L (96h)(Algae)
1,1,1-trichloroethane	LC_{50} : 42.3mg/L (96h)(Fish)	EC_{50} : 11.2mg/L (48h)(Crustaceans)	No information available

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
1,4-dichlorobenzene	NOEC：0.9mg/L(Fish)	NOEC：0.10mg/L(Crustaceans)	NOEC：0.83mg/L(Algae)
Tetrachloroethylene	NOEC：1.9mg/L(Fish)	NOEC：0.023mg/L(Crustaceans)	NOEC：9.1mg/L(Algae)
cis-dichloroethylene	No information available	NOEC：4.5mg/L(Crustaceans)	NOEC：74mg/L(Algae)
1,2-dichloroethane	NOEC：41mg/L(Fish)	NOEC：1.0mg/L(Crustaceans)	NOEC：55mg/L(Algae)
Carbon tetrachloride	No information available	NOEC：0.49mg/L(Crustaceans)	NOEC：0.12mg/L(Algae)
1,2-dichlorobenzene	NOEC：0.8mg/L(Fish)	NOEC：<0.10mg/L(Crustaceans)	NOEC：2.6mg/L(Algae)
1,1-dichloroethane	No information available	NOEC：0.53mg/L(Crustaceans)	NOEC：94mg/L(Algae)
1,2-dichloropropane	NOEC：6~11mg/L(Fish)	NOEC：0.96mg/L(Crustaceans)	NOEC：11mg/L(Algae)
Trichloroethylene	NOEC：5.76mg/L(Fish)	NOEC：2.1mg/L(Crustaceans)	NOEC：45mg/L(Algae)
1,3-dichlorobenzene	NOEC：0.7mg/L(Fish)	NOEC：<0.10mg/L(Crustaceans)	NOEC：2.2mg/L(Algae)
Chlorobenzene	No information available	NOEC：0.72mg/L(Crustaceans)	No information available
1,2,3-trichloropropane	NOEC：4.4mg/L(Fish)	No information available	No information available

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Bromoform	High(Half-life = 360 days)	High(Half-life = 541.21 days)
1-bromo-2-chloroethane	High	High
1,2-dichlorobenzene	High(Half-life = 360 days)	Medium(Half-life = 63.67 days)
cis-dichloroethylene	High	High
trans-dichloroethylene	High	High
Hexachloroethane	High(Half-life = 360 days)	No information available
1,1,1-trichloroethane	High(Half-life = 546 days)	High(Half-life = 2247.04 days)
Tetrachloroethylene	High(Half-life = 720 days)	Medium(Half-life = 160.13 days)
1,1,2-trichloroethane	High(Half-life = 730 days)	Medium(Half-life = 81.5 days)
1,3-dichlorobenzene	High(Half-life = 360 days)	Low(Half-life = 37.13 days)
1,2,3-trichloropropane	High(Half-life = 720 days)	Low(Half-life = 25.54 days)

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Bromoform	Low	BCF=21
1-bromo-2-chloroethane	Low	Log Kow=1.9211
1,2-dichlorobenzene	Low	BCF=260

cis-dichloroethylene	Low	Log Kow=1.9808
trans-dichloroethylene	Low	Log Kow=2.09
Hexachloroethane	Low	BCF=8.5
1,1,1-trichloroethane	Low	BCF=9
Tetrachloroethylene	Low	BCF=77.1
1,1,2-trichloroethane	Low	BCF=17
1,3-dichlorobenzene	High	BCF=6918
1,2,3-trichloropropane	Low	BCF=9

Mobility in soil

Component	log Koc	Remark
Carbon disulphide	1.53	20 ℃
Bromoform	2.08	
Carbon tetrachloride	2.06	20 ℃
Chlorobenzene	2.369	MCI method
1-bromo-2-chloroethane	1.641	
Chloroform	2.27	20 ℃
1,2-dichlorobenzene	2.65	20 ℃
cis-dichloroethylene	1.641	
trans-dichloroethylene	1.641	
Hexachloroethane	2.352	
1,1,1-trichloroethane	0.34	20 ℃
Tetrachloroethylene	2.15	20 ℃
1,1,2-trichloroethane	1.831	
1,2-dichloropropane	1.67	
1,3-dichlorobenzene	2.5	
Trichloroethylene	2.15	
1,2,3-trichloropropane	1.89	20 ℃

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	1131
UN proper shipping name	CARBON DISULPHIDE
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	I
Marine pollutant (Yes or no)	No

IATA-DGR

UN number	1131
UN proper shipping name	CARBON DISULPHIDE
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	I

UN-ADR

UN number	1131
UN proper shipping name	CARBON DISULPHIDE
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	I

Transport in bulk according to IMO instruments

◆ Transport in bulk according to Annex II of MARPOL and the IBC code

	Not Available

◆ Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	Not Available

◆ Transport in bulk in accordance with the IGC Code

	Not Available

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
Carbon disulphide	√	√	√	√	√	√	√	√	√	√	√	√	√
α-chlorotoluene	√	√	√	√	√	√	√	√	√	√	√	√	√
Bromoform	√	√	√	√	√	√	√	√	√	√	√	√	√
Carbon tetrachloride	√	√	√	√	√	√	√	√	√	√	√	√	√
Chlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1-bromo-2-chloroethane	√	√	√	×	√	√	√	√	√	×	√	√	√
Chloroform	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2-dichlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,4-dichlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1-dichloroethane	√	√	√	×	√	√	√	√	√	√	√	√	√
cis-dichloroethylene	√	√	√	×	√	×	√	√	√	×	×	√	√
trans-dichloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2-dichloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
Hexachloroethane	√	√	√	√	√	√	√	√	√	×	√	√	√
1,1,1-trichloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
Tetrachloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1,2-trichloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2-dichloropropane	√	√	√	√	√	√	√	√	√	√	√	√	√
1,3-dichlorobenzene	√	√	√	√	√	√	√	√	√	×	√	√	√
Trichloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,1,2,2-tetrachloroethane	√	√	√	√	√	√	√	√	√	√	√	√	√
1,2,3-trichloropropane	√	√	√	√	√	√	√	√	√	×	√	√	√

【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
Carbon disulphide	×	×	×
α-chlorotoluene	×	×	×
Bromoform	×	×	×
Carbon tetrachloride	√	×	×
Chlorobenzene	×	×	×
1-bromo-2-chloroethane	×	×	×
Chloroform	×	×	×
1,2-dichlorobenzene	×	×	×
1,4-dichlorobenzene	×	×	×
1,1-dichloroethane	×	×	×
cis-dichloroethylene	×	×	×
trans-dichloroethylene	×	×	×
1,2-dichloroethane	×	×	√
Hexachloroethane	×	×	×
1,1,1-trichloroethane	√	×	×
Tetrachloroethylene	×	×	×
1,1,2-trichloroethane	×	×	×
1,2-dichloropropane	×	×	×
1,3-dichlorobenzene	×	×	×
Trichloroethylene	×	×	×
1,1,2,2-tetrachloroethane	×	×	×
1,2,3-trichloropropane	×	×	×

【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

US chemical inventory

Component	A	B	C	D	E	F	G	H
Carbon disulphide	√	√	√	√	√	√	√	√
α-chlorotoluene	√	√	√	√	√	√	√	√
Bromoform	√	×	√	√	√	√	√	√
Carbon tetrachloride	√	×	√	√	√	√	√	√
Chlorobenzene	√	×	√	√	√	√	√	×
1-bromo-2-chloroethane	×	×	×	×	×	×	×	×
Chloroform	√	√	√	√	√	√	√	√

1,2-dichlorobenzene	×	×	√	√	√	√	√	×
1,4-dichlorobenzene	√	×	√	√	√	√	√	√
1,1-dichloroethane	√	×	√	√	√	√	√	√
cis-dichloroethylene	×	×	×	√	×	√	×	×
trans-dichloroethylene	×	×	√	√	×	√	√	×
1,2-dichloroethane	√	×	√	√	√	√	√	√
Hexachloroethane	√	×	√	√	√	√	√	√
1,1,1-trichloroethane	√	×	√	√	√	√	√	√
Tetrachloroethylene	√	×	√	√	√	√	√	√
1,1,2-trichloroethane	√	×	√	√	√	√	√	√
1,2-dichloropropane	√	×	√	√	√	√	√	√
1,3-dichlorobenzene	×	×	√	√	√	√	√	×
Trichloroethylene	√	×	√	√	√	√	√	√
1,1,2,2-tetrachloroethane	√	×	√	√	√	√	√	√
1,2,3-trichloropropane	×	×	×	√	√	√	√	√

[A] US Clean Air Act (CAA)- Section 112, Hazardous Air Pollutants
[B] US SARA 302- Extremely Hazardous Substance List
[C] US CERCLA- Hazardous Substances List
[D] US Massachusetts Right-to-Know Substance List
[E] US New Jersey Right to Know Hazardous Substance List
[F] US Pennsylvania Right to Know Hazardous Substance List
[G] US New York City Right-to-Know Hazardous Substance List
[H] US California Proposition 65 List

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	2025/10/16
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	HCS	Hazard Communication Standard

Disclaimer

This Safety Data Sheet (SDS) was prepared according to OSHA HCS-2024. 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.