Safety Data Sheet

21 Mix ketones in carbon disulphide

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Report No.：BWQ8480-2016-MSDS-EP
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*Prepared in accordance with EU REACH Regulation (REACH 1907/2006 with amendment 2020/878)

1 Identification of the substance/mixture and of the company/undertaking

1.1 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
REACH Registration Number	-
UFI	No information available

1.2 Relevant identified uses of the substance or mixture and uses advised against

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

1.3 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

1.4 Emergency telephone number

Emergency telephone number	010-58103678
Opening hours	24h

2 Hazards identification

2.1 CLP classification according to Regulation (EC) No. 1272/2008 with amendment 2023/707

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
Hazardous to the aquatic environment - long-term (chronic) hazard	Category 2
Hazardous to the ozone layer	Category 1

2.2 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
H360F	May damage fertility
H372	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H420	Harms public health and the environment by destroying ozone in the upper atmosphere
EUH066	Repeated exposure may cause skin dryness or cracking

Precautionary statements

- Prevention

P201	Obtain special instructionsbefore use.
P202	Do not handle until allsafety precautions havebeen 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.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

- Response

P312	Call a POISON CENTRE/ doctor/… if you feel unwell.
P314	Get medical advice/ attention if you feel unwell.

P321	Specific treatment (see related instructions on the label).
P391	Collect spillage.
P302+P352	IF ON SKIN: Wash with plenty of water.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
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.
P502	Refer to manufacturer or supplier for information on recovery or recycling.

2.3 Other hazards

◆ Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Carbon disulphide	Not PBT/vPvB
α-chlorotoluene	Insufficient information, temporarily unable to evaluate
Bromoform	Not PBT/vPvB
Carbon tetrachloride	Not PBT/vPvB
Chlorobenzene	Not PBT/vPvB
1-bromo-2-chloroethane	Insufficient information, temporarily unable to evaluate
Chloroform	Not PBT/vPvB
1,2-dichlorobenzene	Not PBT/vPvB
1,4-dichlorobenzene	Not PBT/vPvB
1,1-dichloroethane	Insufficient information, temporarily unable to evaluate
cis-dichloroethylene	Insufficient information, temporarily unable to evaluate
trans-dichloroethylene	Not PBT/vPvB
1,2-dichloroethane	Not PBT/vPvB
Hexachloroethane	Insufficient information, temporarily unable to evaluate
1,1,1-trichloroethane	Insufficient information, temporarily unable to evaluate
Tetrachloroethylene	Not PBT/vPvB

1,1,2-trichloroethane	Insufficient information, temporarily unable to evaluate
1,2-dichloropropane	Not PBT/vPvB
1,3-dichlorobenzene	Not PBT/vPvB
Trichloroethylene	Not PBT/vPvB
1,1,2,2-tetrachloroethane	Insufficient information, temporarily unable to evaluate
1,2,3-trichloropropane	Not PBT/vPvB

◆ Results of endocrine disrupting properties assessment

Component	Results of endocrine disrupting properties assessment [according to (EU) No 2017/2100 or (EU) No 2018/605]
Carbon disulphide	not ED
α-chlorotoluene	Insufficient information, temporarily unable to evaluate
Bromoform	Insufficient information, temporarily unable to evaluate
Carbon tetrachloride	Insufficient information, temporarily unable to evaluate
Chlorobenzene	Insufficient information, temporarily unable to evaluate
1-bromo-2-chloroethane	Insufficient information, temporarily unable to evaluate
Chloroform	Insufficient information, temporarily unable to evaluate
1,2-dichlorobenzene	Insufficient information, temporarily unable to evaluate
1,4-dichlorobenzene	Insufficient information, temporarily unable to evaluate
1,1-dichloroethane	Insufficient information, temporarily unable to evaluate
cis-dichloroethylene	Insufficient information, temporarily unable to evaluate
trans-dichloroethylene	Insufficient information, temporarily unable to evaluate
1,2-dichloroethane	Insufficient information, temporarily unable to evaluate
Hexachloroethane	Insufficient information, temporarily unable to evaluate
1,1,1-trichloroethane	Insufficient information, temporarily unable to evaluate
Tetrachloroethylene	Insufficient information, temporarily unable to evaluate
1,1,2-trichloroethane	Insufficient information, temporarily unable to evaluate
1,2-dichloropropane	Insufficient information, temporarily unable to evaluate
1,3-dichlorobenzene	Insufficient information, temporarily unable to evaluate
Trichloroethylene	Insufficient information, temporarily unable to evaluate
1,1,2,2-tetrachloroethane	Insufficient information, temporarily unable to evaluate
1,2,3-trichloropropane	Insufficient information, temporarily unable to evaluate

◆ Other

	Not applicable.

3 Composition/information on ingredients

3.1 Substance

	Not applicable

3.2 Mixture

Component	Weight % content(or range)	Classification according to Regulation (EC) No. 1272/2008 with amendment 2023/707 [CLP]	Specific Conc. Limits, M-factors
Carbon disulphide CAS：75-15-0 EC：200-843-6 Index No.：006-003-00-3	83.662	Flammable liquids, Category 2, H225; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Reproductive toxicity, Category 2, H361; Specific target organ toxicity - repeated exposure, Category 1, H372	H361:C ≥ 1%|H372:C ≥ 1%|H373:0.2% ≤C < 1%
α -chlorotoluene CAS：100-44-7 EC：202-853-6 Index No.：602-037-00-3	0.778	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 1, H318; Acute Toxicity - Inhalation, Category 3, H331; Specific target organ toxicity - single exposure; respiratory tract irritation, Category 3, H335; Carcinogenicity, Category 1B, H350; Specific target organ toxicity - repeated exposure, Category 2, H373	-
Bromoform CAS：75-25-2 EC：200-854-6 Index No.：602-007-00-X	0.778	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Acute Toxicity - Inhalation, Category 3, H331; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
Carbon tetrachloride CAS：56-23-5 EC：200-262-8 Index No.：602-008-00-5	0.778	Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Acute Toxicity - Inhalation, Category 3, H331; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 3, H412; Hazardous to the ozone layer, Category 1, H420	H372:C ≥ 1%|H373:0.2% ≤ C < 1%
Chlorobenzene CAS：108-90-7 EC：203-628-5 Index No.：602-033-00-1	0.778	Flammable liquids, Category 3, H226; Skin Corrosion/Irritation, Category 2, H315; Acute Toxicity - Inhalation, Category 4, H332; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
1-bromo-2-chloroethane CAS：107-04-0 EC：203-456-0 Index No.：-	0.778	Not Classified	-
Chloroform CAS：67-66-3 EC：200-663-8 Index No.：602-006-00-4	0.778	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Acute Toxicity - Inhalation, Category 3, H331; Carcinogenicity, Category 2, H351; Reproductive toxicity, Category 2, H361; Specific target organ toxicity - repeated exposure, Category 1, H372	-
1,2-dichlorobenzene CAS：95-50-1 EC：202-425-9 Index No.：602-034-00-7	0.778	Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; respiratory tract	-

		irritation, Category 3, H335; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	
1,4-dichlorobenzene CAS : 106-46-7 EC : 203-400-5 Index No. : 602-035-00-2	0.778	Serious eye damage/irritation, Category 2, H319; Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
1,1-dichloroethane CAS : 75-34-3 EC : 200-863-5 Index No. : 602-011-00-1	0.778	Flammable liquids, Category 2, H225; Acute Toxicity - Oral, Category 4, H302; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; respiratory tract irritation, Category 3, H335; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 3, H412	-
cis-dichloroethylene CAS : 156-59-2 EC : 205-859-7 Index No. : 602-026-00-3	0.778	Flammable liquids, Category 2, H225; Acute Toxicity - Inhalation, Category 4, H332; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 3, H412	-
trans-dichloroethylene CAS : 156-60-5 EC : 205-860-2 Index No. : 602-026-00-3	0.778	Flammable liquids, Category 2, H225; Acute Toxicity - Inhalation, Category 4, H332; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 3, H412	-
1,2-dichloroethane CAS : 107-06-2 EC : 203-458-1 Index No. : 602-012-00-7	0.778	Flammable liquids, Category 2, H225; Acute Toxicity - Oral, Category 4, H302; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; respiratory tract irritation, Category 3, H335; Carcinogenicity, Category 1B, H350	-
Hexachloroethane CAS : 67-72-1 EC : 200-666-4 Index No. : -	0.778	Serious eye damage/irritation, Category 2, H319; Carcinogenicity, Category 2, H351; Specific target organ toxicity - repeated exposure, Category 2, H373; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
1,1,1-trichloroethane CAS : 71-55-6 EC : 200-756-3 Index No. : 602-013-00-2	0.778	Acute Toxicity - Inhalation, Category 4, H332; Hazardous to the ozone layer, Category 1, H420	-
Tetrachloroethylene CAS : 127-18-4 EC : 204-825-9 Index No. : 602-028-00-4	0.778	Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
1,1,2-trichloroethane CAS : 79-00-5 EC : 201-166-9 Index No. : 602-014-00-8	0.778	Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Dermal, Category 4, H312; Acute Toxicity - Inhalation, Category 4, H332; Carcinogenicity, Category 2, H351; Repeated exposure may cause skin dryness or cracking, EUH066	-

1,2-dichloropropane CAS : 78-87-5 EC : 201-152-2 Index No. : 602-020-00-0	0.778	Flammable liquids, Category 2, H225; Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Inhalation, Category 4, H332; Carcinogenicity, Category 1B, H350	-
1,3-dichlorobenzene CAS : 541-73-1 EC : 208-792-1 Index No. : 602-067-00-7	0.778	Acute Toxicity - Oral, Category 4, H302; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
Trichloroethylene CAS : 79-01-6 EC : 201-167-4 Index No. : 602-027-00-9	0.778	Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Germ cell mutagenicity, Category 2, H341; Carcinogenicity, Category 1B, H350; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 3, H412	-
1,1,2,2-tetrachloroethane CAS : 79-34-5 EC : 201-197-8 Index No. : 602-015-00-3	0.778	Acute Toxicity - Dermal, Category 1, H310; Acute Toxicity - Inhalation, Category 2, H330; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
1,2,3-trichloropropane CAS : 96-18-4 EC : 202-486-1 Index No. : 602-062-00-X	0.778	Acute Toxicity - Oral, Category 4, H302; Acute Toxicity - Dermal, Category 4, H312; Acute Toxicity - Inhalation, Category 4, H332; Carcinogenicity, Category 1B, H350; Reproductive toxicity, Category 1B, H360	-

4 First-aid measures

4.1 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.

4.2 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.

4.3 Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

5.1 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.

5.2 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.

5.3 Advice for firefighters

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

6.1 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.

6.2 Environmental precautions

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

6.3 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.

6.4 Reference to other sections

1	Personal Protective Equipment advice is contained in Section 8 of the SDS.
2	Disposal considerations advice is contained in Section 13 of the SDS.

7 Handling and storage

7.1 Precautions for safe handling

◆ Protective measures

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.

◆ Measures to prevent fire

1	Use only non-sparking tools.
2	To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.
3	Use explosion proof equipment.
4	Keep away from heat/sparks/open flames/ hot surfaces.

◆ Measures to prevent aerosol and dust generation

1	Not applicable.

◆ Advice on general occupational hygiene

1	Wash hands and face after using the substances.
2	Replace the contaminated clothing immediately.

7.2 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.
4	Store away from incompatible materials and foodstuff containers.

7.3 Specific end use(s)

1	In addition to use mentioned in the Section 1.2, unforeseen other specific end uses.

8 Exposure controls/personal protection

8.1 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
	European Union	5	15	-	-
	France	5	15	-	-
	Germany (AGS)	10	30	20	60
	Germany (DFG)	5	16	10	32
α-chlorotoluene	Permissible exposure standards for workers in the workplace	1	5.2	2	10.4
	France	1	5	2	11
	United Kingdom	0.5	2.6	1.5	7.9
	Austria	-	0.2	-	0.8
	Belgium	1	5.3	-	-
	Denmark	1	5	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
	France	0.5	5	-	-
	Austria	0.5	5	-	-
	Belgium	0.5	5.3	-	-
	Denmark	0.5	5	1	10
Carbon tetrachloride	Japan - JSOH(2024–2025)	5	31	-	-
	Permissible exposure standards for	2	13	4	19.5

	workers in the workplace				
	European Union	1	6.4	5	32
	France	1	6.4	5	32
	Germany (AGS)	0.5	3.2	1	6.4
	Germany (DFG)	0.5	3.2	1	6.4
Chlorobenzene	Japan - JSOH(2024–2025)	10	46	-	-
	Permissible exposure standards for workers in the workplace	75	345	112.5	431.25
	European Union	5	23	15	70
	France	5	23	15	70
	Germany (AGS)	5	23	10	46
	Germany (DFG)	5	23	10	46
Chloroform	Japan - JSOH(2024–2025)	3	14.7	-	-
	Permissible exposure standards for workers in the workplace	-	-	-	-
	European Union	2	10	-	-
	France	2	10	-	-
	Germany (AGS)	0.5	2.5	1	5
	Germany (DFG)	0.5	2.5	1	5
1,2-dichlorobenzene	Japan - JSOH(2024–2025)	25	150	-	-
	Permissible exposure standards for workers in the workplace	-	-	-	-
	European Union	20	122	50	306
	France	20	122	50	306
	Germany (AGS)	10	61	20	122
	Germany (DFG)	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
	European Union	2	12	10	60

	France	0.75	4.5	10	60
	Germany (AGS)	2	12	4	24
	Germany (DFG)	2	12	4	24
1,1-dichloroethane	Japan - JSOH(2024–2025)	100	400	-	-
	Permissible exposure standards for workers in the workplace	100	405	125	506.25
	European Union	100	412	-	-
	France	100	412	-	-
	Germany (AGS)	50	210	100	420
	Germany (DFG)	50	205	100	410
cis-dichloroethylene	Germany (AGS)	200	800	400	1600
	Germany (DFG)	200	800	400	1600
	United Kingdom	200	806	250	1010
	Austria	200	790	800	3160
	Belgium	200	805	-	-
	Denmark	200	790	400	1580
trans-dichloroethylene	Germany (AGS)	200	800	400	1600
	Germany (DFG)	200	800	400	1600
	United Kingdom	200	806	250	1010
	Austria	200	790	800	3160
	Belgium	200	805	-	-
	Denmark	200	790	400	1580
1,2-dichloroethane	Japan - JSOH(2024–2025)	10	40	-	-
	Permissible exposure standards for workers in the workplace	10	40	15	60
	European Union	2	8.2	-	-
	France	2	8.2	-	-
	Italy	2	8.2	-	-
	United Kingdom	5	21	-	-
Hexachloroethane	Japan - JSOH(2024–2025)	1	9.7	-	-
	Permissible exposure standards for workers in the workplace	1	9.7	2	19.4

	France	1	-	10	-
	Germany (AGS)	1	9.8	2	19.6
	Germany (DFG)	1	9.8	2	19.6
	Austria	1	10(inhalable aerosol)	-	-
1,1,1-trichloroethane	Japan - JSOH(2024–2025)	200	1090	-	-
	Permissible exposure standards for workers in the workplace	350	1910	437.5	1910
	European Union	100	555	200	1110
	France	100	555	200	1110
	Germany (AGS)	100	550	100	550
	Germany (DFG)	100	550	100	550
Tetrachloroethylene	Permissible exposure standards for workers in the workplace	50	339	75	423.75
	European Union	20	138	40	275
	France	20	138	40	275
	Germany (AGS)	10	69	20	138
	Germany (DFG)	10	69	20	138
	Italy	20	138	40	275
1,1,2-trichloroethane	Japan - JSOH(2024–2025)	10	55	-	-
	Permissible exposure standards for workers in the workplace	10	55	15	82.5
	Germany (AGS)	1	5.5	2	11
	Germany (DFG)	1	5.5	2	11
	Austria	10	55	50	275
	Belgium	10	56	-	-
1,2-dichloropropane	Japan - JSOH(2024–2025)	1	4.6	-	-
	Permissible exposure standards for workers in the workplace	75	347	112.5	433.75
	France	75	350	-	-
	Austria	75	350	375	1750

	Belgium	10	47	-	-
	Denmark	75	350	150	700
1,3-dichlorobenzene	Germany (AGS)	2	12	4	24
	Germany (DFG)	2	12	4	24
	Austria	3	20	12	80
	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
	European Union	10	54.7	30	164.1
	France	10	54.7	30	164.1
	Germany (AGS)	6	33	48	264
	Italy	10	54.7	30	164.1
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
	France	1	7	5	35
	Germany (AGS)	1	7	2	14
	Germany (DFG)	2	14	4	28
	Austria	1	7	-	-
1,2,3-trichloropropane	Permissible exposure standards for workers in the workplace	50	302	75	377.5
	Austria	50	300	250	1500
	Belgium	0.005	0.03	-	-
	Denmark	0.1	0.6	0.2	1.2
	Finland	3	18	-	-
	Ireland	0.005	-	-	-

◆ Biological limit values

Component	Standard	Biological monitoring index	Biological limits value	Sampling time	Remark

Carbon disulphide	SCOEL(EU)	2-thiothiazolidine-4-carboxylic acid/urine	1.5mg/g creatinine	end of shift	
		2-Thiothiazolidine-4-carboxylic acid (TTCA)(Creatinine in urine)	0.5mg/g	End of shift	
Chlorobenzene	USA -ACGIH	4-Chlorocatechol, with hydrolysis(Creatinine in urine)	100mg/g	End of shift at end of work week	
		p-Chlorophenol, with hydrolysis(Creatinine in urine)	20mg/g	End of shift at end of work week	
1,1,1-trichloroethane	USA -ACGIH	Methyl chloroform(EXA)	20ppm	Prior to last shift of work week	
		Methyl chloroform(Urine)	700μg/L	End of shift	
Tetrachloroethylene	SCOEL(EU)	tetrachloroethylene/blood	0.4mg/L	prior to the last shift of a work-week	
		tetrachloroethylene/end-exhaled air	3ppm(0.435mg/m3)	prior to the last shift of a work-week	
		Tetrachloroethylene(EXA)	3ppm	Prior to shift	
		Tetrachloroethylene(Blood)	0.5mg/L	Prior to shift	
Trichloroethylene	SCOEL(EU)	trichloroacetic acid/urine	20mg/L	end of the last shift/work-week/ shift period	
		Trichloroacetic acid(Urine)	15mg/L	End of shift at end of work week	
		Trichloroethanol, without hydrolysis(Blood)	0.5mg/L	End of shift at end of work week	
		Trichloroethylene(Blood)	Semi-quantitative	End of shift at end of work week	
		Trichloroethylene(EXA)	Semi-quantitative	End of shift at end of work week	

◆ 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.

◆ Derived No effect level (DNEL)

Component	Route of exposure	DNEL for Workers			
		Acute effects (local)	Acute effects (systemic)	Chronic effects (local)	Chronic effects (systemic)
Carbon disulphide	Inhalation	No data available	No data available	No data available	15.8 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
α-chlorotoluene	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Bromoform	Inhalation	No data available	No data available	No data available	0.592 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Carbon tetrachloride	Inhalation	No data available	No data available	No data available	1.29 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Chlorobenzene	Inhalation	No data available	No data available	No data available	23 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1-bromo-2-chloroethane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Chloroform	Inhalation	No data available	No data available	2.5 mg/m3	2.5 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,2-dichlorobenzene	Inhalation	No data available	No data available	No data available	4.2 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,4-dichlorobenzene	Inhalation	No data available	No data available	No data available	46.1 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,1-dichloroethane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
cis-dichloroethylene	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
trans-dichloroethylene	Inhalation	No data available	No data available	No data available	797 mg/m3
	Oral	No data available	No data available	No data available	No data available

	Dermal	No data available	No data available	No data available	No data available
1,2-dichloroethane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Hexachloroethane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,1,1-trichloroethane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Tetrachloroethylene	Inhalation	No data available	No data available	No data available	138 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,1,2-trichloroethane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,2-dichloropropane	Inhalation	No data available	No data available	No data available	28.88 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,3-dichlorobenzene	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
Trichloroethylene	Inhalation	No data available	No data available	No data available	54.7 mg/m3
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,1,2,2-tetrachloroethane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available
1,2,3-trichloropropane	Inhalation	No data available	No data available	No data available	No data available
	Oral	No data available	No data available	No data available	No data available
	Dermal	No data available	No data available	No data available	No data available

◆ Predicted No Effect Concentration (PNEC)

Component	A	B	C	D	E	F	G	H
Carbon disulphide	10 µg/L	1 µg/L	130 µg/L	70 µg/kg sediment dw	7 µg/kg sediment dw	No hazard identified	8.1 µg/kg soil dw	No potential for bioaccumulation
Bromoform	13 µg/L	1.3 µg/L	No hazard identified	49.5 µg/kg sediment dw	4.95 µg/kg sediment dw	No hazard identified	2.26 µg/kg soil dw	No potential for bioaccumulation
Carbon tetrachloride	220 µg/L	22 µg/L	30 mg/L	No data available	No data available	No hazard identified	No data available	222 µg/kg food
Chlorobenzene	8.4 - 250 µg/L	840 - 25000 ng/L	1.4 mg/L	227 - 6750 µg/kg sediment dw	22.7 - 670 µg/kg sediment dw	No hazard identified	40.3 - 1000 µg/kg soil dw	10 mg/kg food
Chloroform	146 µg/L	15 µg/L	48 µg/L	450 µg/kg sediment dw	90 µg/kg sediment dw	No hazard identified	560 µg/kg soil dw	No potential for bioaccumulation
1,2-dichlorobenzene	3.7 µg/L	370 ng/L	4.7 mg/L	177 µg/kg sediment dw	17.7 µg/kg sediment dw	No hazard identified	33.3 µg/kg soil dw	5.56 mg/kg food
1,4-dichlorobenzene	20 µg/L	2 µg/L	8.6 mg/L	980 µg/kg sediment dw	98 µg/kg sediment dw	No data available	108 µg/kg soil dw	10 mg/kg food
trans-dichloroethylene	36.4 µg/L	3.6 µg/L	17 mg/L	548.3 µg/kg sediment dw	54.8 µg/kg sediment dw	No hazard identified	56.3 µg/kg soil dw	No potential for bioaccumulation
1,2-dichloroethane	1.1 mg/L	110 µg/L	27.8 mg/L	11.1 mg/kg sediment dw	1.11 mg/kg sediment dw	3.4 µg/m³	1.8 mg/kg soil dw	8.33 mg/kg food
1,1,1-trichloroethane	130 µg/L	13 µg/L	No data available	No data available	No data available	No data available	No data available	No potential for bioaccumulation
Tetrachloroethylene	51 µg/L	5.1 µg/L	11.2 mg/L	903 µg/kg sediment dw	90.3 µg/kg sediment dw	8.2 µg/m³	10 µg/kg soil dw	No potential for bioaccumulation
1,2-dichloropropane	82 - 400 µg/L	8.2 - 40 µg/L	590 - 8600 µg/L	676 - 4150 µg/kg sediment dw	67.6 - 415 µg/kg sediment dw	No hazard identified	87.9 - 600 µg/kg soil dw	No potential for bioaccumulation
Trichloroethylene	115 - 576 µg/L	11.5 µg/L	2.6 mg/L	316 - 10200 µg/kg sediment dw	204 µg/kg sediment dw	No hazard identified	155 - 1700 µg/kg soil dw	13.83 mg/kg food

1,2,3-trichloropropane	88 μg/L	8.8 μg/L	2.9 mg/L	100 μg/kg sediment dw	10 μg/kg sediment dw	No hazard identified	150 μg/kg soil dw	1.8 mg/kg food

Note 1:

A: Freshwater; B: Seawater; C: Sewage treatment plant; D: Sediment (freshwater); E: Sediment (seawater); F: Air; G: Soil; H: Secondary poisoning(Hazard for Predators).

Note 2:

The PNEC values of the remaining components not shown in the product are not available yet.

8.2 Exposure controls

8.2.1 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.

8.2.2 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.

8.2.3 Environmental exposure controls

Environmental exposure controls	No information available

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Clear, colorless liquid
Colour	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
Explosive properties	No information available
Oxidizing properties	No information available
Particle characteristics	Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Information with regard to physical hazard classes	No information available

9.2.2 Other safety characteristics

Other safety characteristics	No information available

10 Stability and reactivity

Stability and reactivity

10.1 Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
10.2 Chemical stability	Stable under proper operation and storage conditions.
10.3 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.
10.4 Conditions to avoid	Incompatible materials, heat, flame and spark.
10.5 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.
10.6 Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 with amendment 2023/707

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-single exposure	Based on available data, the classification criteria are not met
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

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
Carbon disulphide	Not Listed	Not Listed
α-chlorotoluene	Category 2A(Remark 1)	Not Listed
Bromoform	Category 3	Not Listed
Carbon tetrachloride	Category 2B	Category R
Chlorobenzene	Not Listed	Not Listed
1-bromo-2-chloroethane	Not Listed	Not Listed
Chloroform	Category 2B	Category R
1,2-dichlorobenzene	Category 3	Not Listed
1,4-dichlorobenzene	Category 2B	Category R
1,1-dichloroethane	Not Listed	Not Listed
cis-dichloroethylene	Not Listed	Not Listed

trans-dichloroethylene	Not Listed	Not Listed
1,2-dichloroethane	Category 2B	Category R
Hexachloroethane	Category 2B	Category R
1,1,1-trichloroethane	Category 2A	Not Listed
Tetrachloroethylene	Category 2A	Category R
1,1,2-trichloroethane	Category 3	Not Listed
1,2-dichloropropane	Category 1	Not Listed
1,3-dichlorobenzene	Category 3	Not Listed
Trichloroethylene	Category 1	Category K
1,1,2,2-tetrachloroethane	Category 2B	Not Listed
1,2,3-trichloropropane	Category 2A	Category R

Remark 1: combined exposures with benzoyl chloride

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Component	Endocrine disrupting properties
Carbon disulphide	Existing research data indicates that this substance is not a reproductive or developmental toxicant, nor does it possess potential endocrine-disrupting properties; therefore, it is not considered a human endocrine disruptor.
α-chlorotoluene	No information available
Bromoform	No information available
Carbon tetrachloride	No information available
Chlorobenzene	No information available
1-bromo-2-chloroethane	No information available
Chloroform	No information available
1,2-dichlorobenzene	No information available
1,4-dichlorobenzene	No information available
1,1-dichloroethane	No information available
cis-dichloroethylene	No information available
trans-dichloroethylene	No information available
1,2-dichloroethane	No information available
Hexachloroethane	No information available
1,1,1-trichloroethane	No information available
Tetrachloroethylene	No information available
1,1,2-trichloroethane	No information available
1,2-dichloropropane	No information available
1,3-dichlorobenzene	No information available
Trichloroethylene	No information available
1,1,2,2-tetrachloroethane	No information available

1,2,3-trichloropropane	No information available

11.2.2 Other Information

Other Information	See Section 11.1

12 Ecological information

12.1 Toxicity

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	EC_{50} : 11.2mg/L	No information available

	(96h)(Fish)	(48h)(Crustaceans)	

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

12.2 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)

12.3 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

12.4 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 ℃

12.5 Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Carbon disulphide	Not PBT/vPvB
α-chlorotoluene	Insufficient information, temporarily unable to evaluate
Bromoform	Not PBT/vPvB
Carbon tetrachloride	Not PBT/vPvB

Chlorobenzene	Not PBT/vPvB
1-bromo-2-chloroethane	Insufficient information, temporarily unable to evaluate
Chloroform	Not PBT/vPvB
1,2-dichlorobenzene	Not PBT/vPvB
1,4-dichlorobenzene	Not PBT/vPvB
1,1-dichloroethane	Insufficient information, temporarily unable to evaluate
cis-dichloroethylene	Insufficient information, temporarily unable to evaluate
trans-dichloroethylene	Not PBT/vPvB
1,2-dichloroethane	Not PBT/vPvB
Hexachloroethane	Insufficient information, temporarily unable to evaluate
1,1,1-trichloroethane	Insufficient information, temporarily unable to evaluate
Tetrachloroethylene	Not PBT/vPvB
1,1,2-trichloroethane	Insufficient information, temporarily unable to evaluate
1,2-dichloropropane	Not PBT/vPvB
1,3-dichlorobenzene	Not PBT/vPvB
Trichloroethylene	Not PBT/vPvB
1,1,2,2-tetrachloroethane	Insufficient information, temporarily unable to evaluate
1,2,3-trichloropropane	Not PBT/vPvB

12.6 Endocrine disrupting properties

Component	Endocrine disrupting properties
Carbon disulphide	Existing research data indicates that this substance is not a reproductive or developmental toxicant, nor does it possess potential endocrine-disrupting properties; therefore, it is not considered an environmental endocrine disruptor.
α-chlorotoluene	No information available
Bromoform	No information available
Carbon tetrachloride	No information available
Chlorobenzene	No information available
1-bromo-2-chloroethane	No information available
Chloroform	No information available
1,2-dichlorobenzene	No information available
1,4-dichlorobenzene	No information available
1,1-dichloroethane	No information available
cis-dichloroethylene	No information available
trans-dichloroethylene	No information available
1,2-dichloroethane	No information available
Hexachloroethane	No information available
1,1,1-trichloroethane	No information available
Tetrachloroethylene	No information available

1,1,2-trichloroethane	No information available
1,2-dichloropropane	No information available
1,3-dichlorobenzene	No information available
Trichloroethylene	No information available
1,1,2,2-tetrachloroethane	No information available
1,2,3-trichloropropane	No information available

12.7 Other adverse effects

	No information available

13 Disposal considerations

13.1 Waste treatment methods

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

14.1 UN number	1131
14.2 UN proper shipping name	CARBON DISULPHIDE
14.3 Transport hazard class	3+6.1
14.4 Packing group	I
14.5 Environmental hazards (Yes or no)	Yes

IATA-DGR

14.1 UN number	1131
14.2 UN proper shipping name	CARBON DISULPHIDE
14.3 Transport hazard class	3+6.1
14.4 Packing group	I
14.5 Environmental hazards (Yes or no)	Yes

UN-ADR

14.1 UN number	1131
14.2 UN proper shipping name	CARBON DISULPHIDE
14.3 Transport hazard class	3+6.1

14.4 Packing group	I
14.5 Environmental hazards (Yes or no)	Yes

Special precautions for user

	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.

Maritime 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

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

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

European chemical inventory

Component	A	B	C	D	E	F	G	H	I
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] Candidate list of Substances of Very High Concern for authorization under EU REACH regulation
[B] Substances requiring authorisation under EU REACH regulation

[C] Substances restricted under EU REACH
[D] Pre-registered substances under EU REACH
[E] Registered substances under EU REACH
[F] Substance Evaluation – CoRAP under EU REACH
[G] List of priority substances under EU water policy （Directive 2455/2001/EC）
[H] Substances subject to POPs Regulation
[I] Substances proposed as POPs

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

German water hazard class(WGK)

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

【WGK 1】 slightly hazardous to water
【WGK 2】 obviously hazardous to water
【WGK 3】 highly hazardous to water
【nwg】 non-hazardous to water
【awg】 hazardous to water in general

German technical instructions on air quality control(TA LUFT)

Component	TA LUFT	Remark
α-chlorotoluene	Chapter 5.2.7.1.1 Carcinogenic	

	substances. Class II. As minimum requirement, the following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:1,5 g/hr or Mass conc.:0,5 mg/m³	
Bromoform	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Carbon tetrachloride	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
1-bromo-2-chloroethane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
Chloroform	Chapter 5.2.7.1.1 Carcinogenic SubstancesThe substance must be assigned to the class (I, II or III) whose substances have the nearest potency. We can not accomplish this evaluation due to insufficiency of data.Carcinogenic substances not mentioned by name and for which no information on potency is available should be assigned to Class I as a precautionary measure.	
1,4-dichlorobenzene	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
1,1-dichloroethane	Chapter 5.2.5 Organic Substances. Class II. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow: 0,50 kg/hr or Mass conc.: 0,10 g/m³ TECHNICAL INSTRUCTIONS ON AIR QUALITY CONTROL Chapter 5.2.5 Organic Substances.The following values, specified as overall carbon, are in all not allowed to be exceeded in exhaust gas:Mass flow:0,50 kg/hr or Mass conc.:50 mg/m³ At old units with an annual mass flow till 1,5 Mg/a, specified as total carbon, the emissions in exhaust gas are not allowed to exceed 1,5 kg/h.	
cis-dichloroethylene	Chapter 5.2.5 Organic Substances. Class II. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow: 0,50 kg/hr or Mass conc.: 0,10 g/m³	
trans-dichloroethylene	Chapter 5.2.5 Organic Substances. Class II. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow: 0,50 kg/hr or Mass conc.: 0,10 g/m³	

1,2-dichloroethane	Chapter 5.2.7.1.1 Carcinogenic substances. Class III. As minimum requirement, the following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:2,5 g/hr or Mass conc.:1 mg/m³	
Hexachloroethane	Chapter 5.2.5 Organic Substances, dust,including fine dust.To be treated as overall dust. The emissions of dust in the exhaust gas are not allowed to exceed the following values:Mass flow:0,20 kg/hr or Mass conc.:20 mg/m³ The mass per unit volume of 0,15 g/m³ in exhaust gas is not allowed to be exceeded also on observance or lower deviation of a mass flow of 0,20 kg/h.For emission sources that exceed the mass flow rate of 0.40 kg/h, the mass concentration in waste gas the mass concentration must not exceed 10 mg/m³.	
1,1,1-trichloroethane	Chapter 5.2.5 Organic Substances. Class II. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow: 0,50 kg/hr or Mass conc.: 0,10 g/m³	
Tetrachloroethylene	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
1,1,2-trichloroethane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
1,2-dichloropropane	Chapter 5.2.7.1.1 Carcinogenic SubstancesThe substance must be assigned to the class (I, II or III) whose substances have the nearest potency. We can not accomplish this evaluation due to insufficiency of data.Carcinogenic substances not mentioned by name and for which no information on potency is available should be assigned to Class I as a precautionary measure.	
Trichloroethylene	Chapter 5.2.7.1.1 Carcinogenic substances. Class III. As minimum requirement, the following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:2,5 g/hr or Mass conc.:1 mg/m³	
1,1,2,2-tetrachloroethane	Chapter 5.2.5 Organic Substances, class I. The following values are in all not allowed to be exceeded in the exhaust gas:Mass flow:0,10 kg/hr or Mass conc.:20 mg/m³	
1,2,3-trichloropropane	Chapter 5.2.7.1.1 Carcinogenic SubstancesThe substance must be assigned to the class (I, II or III)	

	whose substances have the nearest potency. We can not accomplish this evaluation due to insufficiency of data.Carcinogenic substances not mentioned by name and for which no information on potency is available should be assigned to Class I as a precautionary measure.	

German technical rules for hazardous substances(TRGS)

Component	TRGS	Remark
Carbon disulphide	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724|TRGS 523	
α-chlorotoluene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
Bromoform	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Carbon tetrachloride	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Chlorobenzene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
1-bromo-2-chloroethane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Chloroform	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510	
1,2-dichlorobenzene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
1,4-dichlorobenzene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
1,1-dichloroethane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
cis-dichloroethylene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	

trans-dichloroethylene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
1,2-dichloroethane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
Hexachloroethane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
1,1,1-trichloroethane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Tetrachloroethylene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
1,1,2-trichloroethane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
1,2-dichloropropane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
1,3-dichlorobenzene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
Trichloroethylene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510	
1,1,2,2-tetrachloroethane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 402|TRGS 500|TRGS 509|TRGS 510	
1,2,3-trichloropropane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 800	

15.2 Chemical safety assessment

	No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

16 Other information

Information on revision

Creation Date	2026/01/08
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 REACH Regulation 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.