Safety Data Sheet

22 kinds of TVOCs in Methanol

Version：V2.0.0.1
Report No.：BWQ9294-2016-MSDS-EP
Creation Date：2026/01/13
Revision Date：-

*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	22 kinds of TVOCs in Methanol
Cat No.	BWQ9294-2016
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 - Oral	Category 3
Acute Toxicity - Dermal	Category 3
Acute Toxicity - Inhalation	Category 3
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1

Specific target organ toxicity - single exposure	Category 1
Specific target organ toxicity - repeated exposure	Category 2
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
H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H340	May cause genetic defects
H350	May cause cancer
H370	Causes damage to organs
H373	May cause damage to organs through prolonged or repeated exposure(hearing organ)
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.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.

P280	Wear protective gloves/protective clothing/eye protection/face protection.

◆ Response

P311	Call a POISON CENTER/ doctor.
P314	Get medical advice/ attention if you feel unwell.
P321	Specific treatment (see related instructions on the label).
P330	Rinse mouth.
P391	Collect spillage.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: 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].

◆ Storage

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

◆ Disposal

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

2.3 Other hazards

◆ Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Methanol	Not PBT/vPvB
N-hexane	Not PBT/vPvB
Heptane	Insufficient information, temporarily unable to evaluate
Cyclohexane	Not PBT/vPvB
Methylcyclohexane	Not PBT/vPvB
Octane	Not PBT/vPvB
Carbon tetrachloride	Not PBT/vPvB
Nonane	Not PBT/vPvB
Ethyl acetate	Not PBT/vPvB
Benzene	Not PBT/vPvB
Trichloroethylene	Not PBT/vPvB
Chloroform	Not PBT/vPvB

Tetrachloroethylene	Not PBT/vPvB
Toluene	Not PBT/vPvB
N-butyl acetate	Not PBT/vPvB
Ethylbenzene	Not PBT/vPvB
p-xylene	Not PBT/vPvB
m-xylene	Not PBT/vPvB
o-xylene	Not PBT/vPvB
Chlorobenzene	Not PBT/vPvB
Styrene	Not PBT/vPvB
1,4-dichlorobenzene	Not PBT/vPvB
Hexadecane	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]
Methanol	Insufficient information, temporarily unable to evaluate
N-hexane	Insufficient information, temporarily unable to evaluate
Heptane	Insufficient information, temporarily unable to evaluate
Cyclohexane	Insufficient information, temporarily unable to evaluate
Methylcyclohexane	Insufficient information, temporarily unable to evaluate
Octane	Insufficient information, temporarily unable to evaluate
Carbon tetrachloride	Insufficient information, temporarily unable to evaluate
Nonane	Insufficient information, temporarily unable to evaluate
Ethyl acetate	Insufficient information, temporarily unable to evaluate
Benzene	Insufficient information, temporarily unable to evaluate
Trichloroethylene	Insufficient information, temporarily unable to evaluate
Chloroform	Insufficient information, temporarily unable to evaluate
Tetrachloroethylene	Insufficient information, temporarily unable to evaluate
Toluene	Insufficient information, temporarily unable to evaluate
N-butyl acetate	Insufficient information, temporarily unable to evaluate
Ethylbenzene	Insufficient information, temporarily unable to evaluate
p-xylene	Insufficient information, temporarily unable to evaluate
m-xylene	Insufficient information, temporarily unable to evaluate
o-xylene	Insufficient information, temporarily unable to evaluate
Chlorobenzene	Insufficient information, temporarily unable to evaluate
Styrene	Insufficient information, temporarily unable to evaluate
1,4-dichlorobenzene	Insufficient information, temporarily unable to evaluate
Hexadecane	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
Methanol CAS：67-56-1 EC：200-659-6 Index No.：603-001-00-X	85.898	Flammable liquids, Category 2, H225; Acute Toxicity - Oral, Category 3, H301; Acute Toxicity - Dermal, Category 3, H311; Acute Toxicity - Inhalation, Category 3, H331; Specific target organ toxicity - single exposure, Category 1, H370	H370:C ≥ 10%|H371:3% ≤ C < 10%
N-hexane CAS：110-54-3 EC：203-777-6 Index No.：601-037-00-0	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Reproductive toxicity, Category 2, H361; Specific target organ toxicity - repeated exposure, Category 1, H372; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
Heptane CAS：142-82-5 EC：205-563-8 Index No.：601-008-00-2	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Cyclohexane CAS：110-82-7 EC：203-806-2 Index No.：601-017-00-1	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Methylcyclohexane CAS：108-87-2 EC：203-624-3 Index No.：601-018-00-7	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2, H411	-
Octane CAS：111-65-9 EC：203-892-1	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315;	-

Index No. : 601-009-00-8		Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	
Carbon tetrachloride CAS：56-23-5 EC：200-262-8 Index No. : 602-008-00-5	0.641	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%
Nonane CAS：111-84-2 EC：203-913-4 Index No. : -	0.641	Flammable liquids, Category 3, H226; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Hazardous to the aquatic environment - short-term (acute) hazard, Category 1, H400; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 1, H410	-
Ethyl acetate CAS：141-78-6 EC：205-500-4 Index No. : 607-022-00-5	0.641	Flammable liquids, Category 2, H225; Serious eye damage/irritation, Category 2, H319; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Repeated exposure may cause skin dryness or cracking, EUH066	-
Benzene CAS：71-43-2 EC：200-753-7 Index No. : 601-020-00-8	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Germ cell mutagenicity, Category 1B, H340; Carcinogenicity, Category 1A, H350; Specific target organ toxicity - repeated exposure, Category 1, H372	-
Trichloroethylene CAS：79-01-6 EC：201-167-4 Index No. : 602-027-00-9	0.641	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	-
Chloroform CAS：67-66-3 EC：200-663-8 Index No. : 602-006-00-4	0.641	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	-
Tetrachloroethylene CAS：127-18-4 EC：204-825-9	0.641	Carcinogenicity, Category 2, H351; Hazardous to the aquatic environment - long-term (chronic) hazard, Category 2,	-

Index No. : 602-028-00-4		H411	
Toluene CAS : 108-88-3 EC : 203-625-9 Index No. : 601-021-00-3	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Skin Corrosion/Irritation, Category 2, H315; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Reproductive toxicity, Category 2, H361; Specific target organ toxicity - repeated exposure, Category 2, H373	-
N-butyl acetate CAS : 123-86-4 EC : 204-658-1 Index No. : 607-025-00-1	0.641	Flammable liquids, Category 3, H226; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336; Repeated exposure may cause skin dryness or cracking, EUH066	-
Ethylbenzene CAS : 100-41-4 EC : 202-849-4 Index No. : 601-023-00-4	0.641	Flammable liquids, Category 2, H225; Aspiration hazard, Category 1, H304; Acute Toxicity - Inhalation, Category 4, H332; Specific target organ toxicity - repeated exposure, Category 2, H373	-
p-xylene CAS : 106-42-3 EC : 203-396-5 Index No. : 601-022-00-9	0.641	Flammable liquids, Category 3, H226; Acute Toxicity - Dermal, Category 4, H312; Skin Corrosion/Irritation, Category 2, H315; Acute Toxicity - Inhalation, Category 4, H332	-
m-xylene CAS : 108-38-3 EC : 203-576-3 Index No. : 601-022-00-9	0.641	Flammable liquids, Category 3, H226; Acute Toxicity - Dermal, Category 4, H312; Skin Corrosion/Irritation, Category 2, H315; Acute Toxicity - Inhalation, Category 4, H332	-
o-xylene CAS : 95-47-6 EC : 202-422-2 Index No. : 601-022-00-9	0.641	Flammable liquids, Category 3, H226; Acute Toxicity - Dermal, Category 4, H312; Skin Corrosion/Irritation, Category 2, H315; Acute Toxicity - Inhalation, Category 4, H332	-
Chlorobenzene CAS : 108-90-7 EC : 203-628-5 Index No. : 602-033-00-1	0.641	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	-
Styrene CAS : 100-42-5 EC : 202-851-5 Index No. : 601-026-00-0	0.641	Flammable liquids, Category 3, H226; Skin Corrosion/Irritation, Category 2, H315; Serious eye damage/irritation, Category 2, H319; Acute Toxicity - Inhalation, Category 4, H332; Reproductive toxicity, Category 2, H361; Specific target organ toxicity - repeated exposure, Category 1, H372	-
1,4-dichlorobenzene CAS : 106-46-7 EC : 203-400-5 Index No. : 602-035-00-2	0.641	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	-
Hexadecane CAS : 544-76-3 EC : 208-878-9 Index No. : -	0.641	Aspiration hazard, Category 1, H304	-

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	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Ingestion	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Refer for medical attention.
Inhalation	Fresh air, rest. Refer for medical attention.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

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	Development of hazardous combustion gases or vapor possible in the event of fire.
6	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	Use personal protective equipment,do not breathe gas/mist/vapour/spray.
6	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
7	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	Cut off the source of the leak as much as possible.
9	Keep leaks in a ventilated place.
10	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
11	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
12	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.
13	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
Methanol	Japan - JSOH(2024–2025)	200	260	-	-
	Permissible exposure standards for workers in the workplace	200	262	250	327.5
	European Union	200	260	-	-
	France	200	260	-	-
	Germany (AGS)	100	130	200	260
	Germany (DFG)	100	130	200	260
N-hexane	Japan - JSOH(2024–2025)	40	140	-	-
	Permissible exposure standards for workers in the workplace	50	176	75	220
	European Union	20	72	-	-
	France	20	72	-	-
	Germany (AGS)	50	180	400	1440

	Germany (DFG)	50	180	400	1440
Heptane	Japan - JSOH(2024–2025)	200	820	-	-
	Permissible exposure standards for workers in the workplace	400	1640	500	1640
	European Union	500	2085	-	-
	France	400	1668	500	2085
	Germany (AGS)	500	2100	500	2100
	Germany (DFG)	500	2100	500	2100
Cyclohexane	Japan - JSOH(2024–2025)	150	520	-	-
	Permissible exposure standards for workers in the workplace	300	1030	375	1030
	European Union	200	700	-	-
	France	200	700	-	-
	Germany (AGS)	200	700	800	2800
	Germany (DFG)	200	700	800	2800
Methylcyclohexane	Japan - JSOH(2024–2025)	400	1600	-	-
	Permissible exposure standards for workers in the workplace	400	1610	500	1610
	France	400	1600	-	-
	Germany (AGS)	200	810	400	1620
	Germany (DFG)	200	810	400	1620
	United Kingdom	196	800	-	-
Octane	Japan - JSOH(2024–2025)	300	1400	-	-
	Permissible exposure standards for workers in the workplace	300	1400	375	1400
	France	300	1450	-	-
	Germany (AGS)	500	2400	1000	4800
	Germany (DFG)	500	2400	1000	4800
	United Kingdom	210	1200	-	-
Carbon tetrachloride	Japan - JSOH(2024–202	5	31	-	-

	5)				
	Permissible exposure standards for workers in the workplace	2	13	4	19.5
	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
Nonane	Japan - JSOH(2024–2025)	200	1050	-	-
	Permissible exposure standards for workers in the workplace	200	1050	250	1050
	France	200	1050	-	-
	United Kingdom	222	1200	-	-
	Belgium	200	1065	-	-
	Denmark	200	1050	400	2100
Ethyl acetate	Japan - JSOH(2024–2025)	200	720	-	-
	Permissible exposure standards for workers in the workplace	400	1440	500	1440
	European Union	200	734	400	1468
	France	200	734	400	1468
	Germany (AGS)	200	730	400	1460
	Germany (DFG)	200	750	400	1500
Benzene	Japan - JSOH(2024–2025)	1(individual excess lifetime risk of cancer 10^-3)	-	-	-
	Permissible exposure standards for workers in the workplace	1	3.2	2	6.4
	European Union	0.2	0.66	-	-
	France	1	3.25	-	-
	Germany (AGS)	0.6	1.9	4.8	15.2
	Italy	1	3.25	-	-
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
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
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
Toluene	Japan - JSOH(2024–2025)	50	188	-	-
	Permissible exposure standards for workers in the workplace	50	188	75	235
	European Union	50	192	100	384
	France	20	76.8	100	384
	Germany (AGS)	50	190	100	380
	Germany (DFG)	50	190	100	380
N-butyl acetate	Japan - JSOH(2024–2025)	100	475	-	-
	Permissible exposure standards for workers in the workplace	150	712	187.5	890

	European Union	50	241	150	723
	France	50	241	150	723
	Germany (AGS)	62	300	124	600
	Germany (DFG)	100	480	200	960
Ethylbenzene	Japan - JSOH(2024–2025)	20	87	-	-
	Permissible exposure standards for workers in the workplace	100	434	125	542.5
	European Union	100	442	200	884
	France	20	88.4	100	442
	Germany (AGS)	20	88	40	176
	Germany (DFG)	20	88	40	176
p-xylene	Permissible exposure standards for workers in the workplace	100	434	125	542.5
	European Union	50	221	100	442
	France	50	221	100	442
	Germany (AGS)	50	220	100	440
	Germany (DFG)	50	220	100	440
	Italy	50	221	100	442
m-xylene	Permissible exposure standards for workers in the workplace	100	434	125	542.5
	European Union	50	221	100	442
	France	50	221	100	442
	Germany (AGS)	50	220	100	440
	Germany (DFG)	50	220	100	440
	Italy	50	221	100	442
o-xylene	Permissible exposure standards for workers in the workplace	100	434	125	542.5
	European Union	50	221	100	442
	Germany (AGS)	50	220	100	440
	Germany (DFG)	50	220	100	440
	Italy	50	221	100	442
	United Kingdom	50	220	100	441

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
Styrene	Japan - JSOH(2024–2025)	10	42.6	-	-
	Permissible exposure standards for workers in the workplace	50	213	75	266.25
	France	23.3	100	46.6	200
	Germany (AGS)	20	86	40	172
	Germany (DFG)	20	86	40	172
	United Kingdom	100	430	250	1080
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

◆ Biological limit values

Component	Standard	Biological monitoring index	Biological limits value	Sampling time	Remark
Methanol	USA -ACGIH	Methanol(Urine)	15mg/L	End of shift	
N-hexane	USA -ACGIH	2,5-Hexanedione, without hydrolysis(Urine)	0.5mg/L	End of shift	
Cyclohexane	USA -ACGIH	1,2-Cyclohexanediol, with hydrolysis(Creatinine in urine)	50mg/g	End of shift at end of work week	
Benzene	SCOEL(EU)	benzene/blood	28 µg/L	immediately end of shift	

		phenylmercapturic acid/urine	46 µg/L creatinine	end of exposure/shift	
		S-Phenylmercapturic acid(Creatinine in urine)	25µg/g	End of shift	
		t,t-Muconic acid(Creatinine in urine)	500µg/g	End of 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	
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	
Toluene	USA -ACGIH	o-Cresol, with hydrolysis(Creatinine in urine)	0.3mg/g	End of shift	
		Toluene(Urine)	0.03mg/L	End of shift	
		Toluene(Blood)	0.02mg/L	Prior to last shift of work week	
Ethylbenzene	USA -ACGIH	Sum of mandelic acid and phenylglyoxylic acid(Creatinine in urine)	150mg/g	End of shift	
p-xylene	USA -ACGIH	Methylhippuric acids(Creatinine in urine)	0.3g/g	End of shift	
m-xylene	USA -ACGIH	Methylhippuric acids(Creatinine in urine)	0.3g/g	End of shift	
o-xylene	USA -ACGIH	Methylhippuric acids(Creatinine in urine)	0.3g/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	20mg/g	End of shift at end of work	

		hydrolysis(Creatinine in urine)		week	
Styrene	USA -ACGIH	Mandelic acid plus phenylglyoxylic acid(Creatinine in urine)	150mg/g	End of shift	
		Styrene(Urine)	20μg/L	End of shift	

◆ 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)
Methanol	Inhalation	No data available	No data available	130 mg/m3	130 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
N-hexane	Inhalation	No data available	No data available	No data available	75 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
Heptane	Inhalation	No data available	No data available	No data available	2085 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
Cyclohexane	Inhalation	No data available	No data available	700 mg/m3	700 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
Methylcyclohexane	Inhalation	No data available	No data available	No data available	64.3 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
Octane	Inhalation	No data available	No data available	No data available	2035 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
Nonane	Inhalation	No data available	No data available	No data available	2035 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
Ethyl acetate	Inhalation	No data available	No data available	734 mg/m3	734 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
Benzene	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
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
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
Toluene	Inhalation	No data available	No data available	192 mg/m3	192 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
N-butyl acetate	Inhalation	No data available	No data available	300 mg/m3	300 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
Ethylbenzene	Inhalation	No data available	No data available	No data available	77 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
p-xylene	Inhalation	No data available	No data available	221 mg/m3	221 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
m-xylene	Inhalation	No data available	No data available	221 mg/m3	221 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
o-xylene	Inhalation	No data available	No data available	221 mg/m3	221 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
Styrene	Inhalation	No data available	No data available	100 mg/m3	100 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
Hexadecane	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
Methanol	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No hazard identified	No potential for bioaccumulation
N-hexane	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	No potential for bioaccumulation
Heptane	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	No potential for bioaccumulation
Cyclohexane	44.7 µg/L	4.47 µg/L	3.24 mg/L	3.6 mg/kg sediment dw	360 µg/kg sediment dw	No hazard identified	694 µg/kg soil dw	No potential for bioaccumulation
Methylcyclohexane	1.34 µg/L	134 ng/L	273 µg/L	36.2 µg/kg sediment dw	3.62 µg/kg sediment dw	No hazard identified	9.7 µg/kg soil dw	No potential for bioaccumulation
Octane	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	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
Nonane	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	No potential for bioaccumulation
Ethyl acetate	240 µg/L	24 µg/L	650 mg/L	1.15 mg/kg sediment dw	115 µg/kg sediment dw	No hazard identified	148 µg/kg soil dw	200 mg/kg food
Benzene	80 µg/L	8 µg/L	39 mg/L	1.36 mg/kg sediment dw	136 µg/kg sediment dw	No data available	225 µg/kg soil dw	No potential for bioaccumulation
Trichloroethylene	115 - 576	11.5 µg/L	2.6 mg/L	316 -	204	No	155 -	13.83

	µg/L			10200 µg/kg sediment dw	µg/kg sediment dw	hazard identified	1700 µg/kg soil dw	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
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
Toluene	74 - 680 µg/L	7.4 - 680 µg/L	840 - 13610 µg/L	1.78 - 16.39 mg/kg sediment dw	178 - 16390 µg/kg sediment dw	No hazard identified	313 - 2890 µg/kg soil dw	No potential for bioaccumulation
N-butyl acetate	180 µg/L	18 µg/L	35.6 mg/L	981 µg/kg sediment dw	98.1 µg/kg sediment dw	No hazard identified	90.3 µg/kg soil dw	No potential for bioaccumulation
Ethylbenzene	100 µg/L	10 - 100 µg/L	9.6 mg/L	13.7 mg/kg sediment dw	1.37 mg/kg sediment dw	No hazard identified	2.68 mg/kg soil dw	20 mg/kg food
p-xylene	44 µg/L	4.4 µg/L	1.6 mg/L	2.52 mg/kg sediment dw	252 µg/kg sediment dw	No hazard identified	852 µg/kg soil dw	No potential for bioaccumulation
m-xylene	44 µg/L	4.4 µg/L	1.6 mg/L	2.52 mg/kg sediment dw	252 µg/kg sediment dw	No hazard identified	852 µg/kg soil dw	No potential for bioaccumulation
o-xylene	8.8 - 250 µg/L	880 - 250000 ng/L	1.6 - 5 mg/L	500 - 14330 µg/kg sediment dw	50 - 14330 µg/kg sediment dw	No hazard identified	95 - 2410 µg/kg soil dw	No potential for bioaccumulation
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
Styrene	28 - 40 µg/L	14 - 40 µg/L	5 mg/L	418 - 614 µg/kg sediment dw	307 - 418 µg/kg sediment dw	No hazard identified	146 - 200 µg/kg soil dw	No potential for bioaccumulation
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
Hexadecane	No data available	No data available	No data available	No data available	No data available	No hazard identified	No data available	No data available
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)	-98 (Methanol)
Initial boiling point and boiling range(°C)	65 (Methanol)
Flash point(Closed cup,°C)	9 (Methanol)
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit：50 (Methanol)；Lower limit：6 (Methanol)
Vapor pressure	12.9 kPa (20°C,Methanol)
Vapor density(Air = 1)	1.1 (Methanol)

Relative density(Water=1)	0.79 (20°C,Methanol)
Solubility	Miscible with water (Methanol)
n-octanol/water partition coefficient	-0.74 (Methanol)
Auto-ignition temperature(°C)	440 (Methanol)
Decomposition temperature(°C)	No information available
Kinematic viscosity	0.544 mPa (25°C,Methanol)
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	In contact with oxidants causes severe reactions, and may cause a fire or explosion. In contact with an open flame may cause a fire or explosion. In contact with metals, oxidants, triethyl aluminium, amines, boranes and their derivatives may cause an explosion severely. In contact with metal alkoxides may cause a fire. In contact with halides may cause an active reaction. Reactions with metals form metal organic coumpounds.
10.4 Conditions to avoid	Incompatible materials, heat, flame and spark.
10.5 Incompatible materials	Oxidants, alkali metals, alkaline earth metals and aluminum. Oxidantss and halogen. Borane class and its derivatives, amines, metals, oxidants, triethyl aluminium, calcium and ethylene. Metal alkyl oxide, metal hydride, inorganic peroxide, nitrate and halogens oxyacid salts. Halides, oxidants and halogen. Metal, oxidantss and alkali.
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

22 kinds of TVOCs in Methanol	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Based on available data, the classification criteria are not met
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	Based on available data, the classification criteria are not met

STOT-single exposure	Causes damage to organs(Category 1)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure(hearing organ)(Category 2)
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	May cause genetic defects(Category 1B)

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
Octane	No information available	No information available	118mg/L(Rat)
Carbon tetrachloride	2350mg/kg(Rat)	> 20000mg/kg(Rabbit)	50.330mg/L(Rat)
Chlorobenzene	1110mg/kg(Rat)	No information available	No information available
Chloroform	695mg/kg(Rat)	> 20000mg/kg(Rabbit)	47.702mg/L(Rat)
Styrene	2650mg/kg(Rat)	No information available	12mg/L(Rat)
Trichloroethylene	4920mg/kg(Rat)	> 20000mg/kg(Rabbit)	45.409mg/L(Mouse)
m-xylene	5000mg/kg(Rat)	12200mg/kg(Rabbit)	No information available
1,4-dichlorobenzene	500~5000mg/kg(Rat)	> 2000mg/kg(Rabbit)	No information available
Toluene	636mg/kg(Rat)	12200mg/kg(Rabbit)	49mg/L(Rat)
p-xylene	5000mg/kg(Rat)	No information available	19.758mg/L(Rat)
Ethyl acetate	5620mg/kg(Rat)	> 18000mg/kg(Rabbit)	No information available
N-hexane	25000mg/kg(Rat)	No information available	169.188mg/L(Rat)
Ethylbenzene	3500mg/kg(Rat)	15400mg/kg(Rabbit)	No information available
Nonane	No information available	No information available	16.787mg/L(Rat)
Methanol	5628mg/kg(Rat)	15800mg/kg(Rabbit)	83.867mg/L(Rat)
N-butyl acetate	10768mg/kg(Rat)	> 17600mg/kg(Rabbit)	No information available
Benzene	930mg/kg(Rat)	> 8260mg/kg(Rabbit)	No information available
Methylcyclohexane	> 3200mg/kg(Rat)	No information available	No information available
Cyclohexane	12705mg/kg(Rat)	No information available	No information available
Tetrachloroethylene	2629mg/kg(Rat)	No information available	35.269mg/L(Mouse)
Heptane	No information available	No information available	103mg/L(Rat)

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Methanol	Not Listed	Not Listed
N-hexane	Not Listed	Not Listed
Heptane	Not Listed	Not Listed
Cyclohexane	Not Listed	Not Listed
Methylcyclohexane	Not Listed	Not Listed
Octane	Not Listed	Not Listed
Carbon tetrachloride	Category 2B	Category R

Nonane	Not Listed	Not Listed
Ethyl acetate	Not Listed	Not Listed
Benzene	Category 1	Category K
Trichloroethylene	Category 1	Category K
Chloroform	Category 2B	Category R
Tetrachloroethylene	Category 2A	Category R
Toluene	Category 3	Not Listed
N-butyl acetate	Not Listed	Not Listed
Ethylbenzene	Category 2B	Not Listed
p-xylene	Not Listed	Not Listed
m-xylene	Not Listed	Not Listed
o-xylene	Not Listed	Not Listed
Chlorobenzene	Not Listed	Not Listed
Styrene	Category 2A	Category R
1,4-dichlorobenzene	Category 2B	Category R
Hexadecane	Not Listed	Not Listed

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Component	Endocrine disrupting properties
Methanol	No information available
N-hexane	No information available
Heptane	No information available
Cyclohexane	No information available
Methylcyclohexane	No information available
Octane	No information available
Carbon tetrachloride	No information available
Nonane	No information available
Ethyl acetate	No information available
Benzene	No information available
Trichloroethylene	No information available
Chloroform	No information available
Tetrachloroethylene	No information available
Toluene	No information available
N-butyl acetate	No information available
Ethylbenzene	No information available
p-xylene	No information available
m-xylene	No information available

o-xylene	No information available
Chlorobenzene	No information available
Styrene	No information available
1,4-dichlorobenzene	No information available
Hexadecane	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
Octane	LC_{50} : 0.42mg/L (96h)(Fish)	EC_{50} : 0.18mg/L (48h)(Crustaceans)	ErC_{50} : >1.1mg/L (72h)(Algae)
Carbon tetrachloride	LC_{50} : 7.6mg/L (96h)(Fish)	EC_{50} : 8.1mg/L (48h)(Crustaceans)	ErC_{50} : 0.46mg/L (72h)(Algae)
Chlorobenzene	LC_{50} : 6.6mg/L (96h)(Fish)	EC_{50} : 5.29mg/L (48h)(Crustaceans)	ErC_{50} : 202mg/L (96h)(Algae)
Chloroform	LC_{50} : > 110mg/L (96h)(Fish)	No information available	No information available
Styrene	LC_{50} : 4.02mg/L (96h)(Fish)	EC_{50} : 4.7mg/L (48h)(Crustaceans)	ErC_{50} : 0.72mg/L (96h)(Algae)
Trichloroethylene	LC_{50} : 42.4mg/L (96h)(Fish)	EC_{50} : 11mg/L (48h)(Crustaceans)	ErC_{50} : 77mg/L (72h)(Algae)
m-xylene	LC_{50} : 10.6mg/L (96h)(Fish)	EC_{50} : 2.4mg/L (48h)(Crustaceans)	ErC_{50} : 8.9mg/L (72h)(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)
Toluene	LC_{50} : 25mg/L (96h)(Fish)	EC_{50} : 4.1mg/L (48h)(Crustaceans)	ErC_{50} : 29mg/L (72h)(Algae)
p-xylene	LC_{50} : 5.5mg/L (96h)(Fish)	EC_{50} : 6.9mg/L (48h)(Crustaceans)	ErC_{50} : 9.6mg/L (72h)(Algae)
Ethyl acetate	LC_{50} :230mg/L (96h)(Fish)	No information available	ErC_{50} : 2500mg/L (96h)(Algae)
N-hexane	LC_{50} : 57.8mg/L (96h)(Fish)	No information available	No information available
Ethylbenzene	LC_{50} : 4.2mg/L (96h)(Fish)	EC_{50} : 4.75mg/L (48h)(Crustaceans)	ErC_{50} : 3.6mg/L (96h)(Algae)
Nonane	LC_{50} : 0.368mg/L (96h)(Fish)	No information available	No information available
Methanol	LC_{50} : 24000mg/L (96h)(Fish)	EC_{50} : 24500mg/L (48h)(Crustaceans)	No information available
N-butyl acetate	LC_{50} : 18mg/L (96h)(Fish)	No information available	No information available
Benzene	LC_{50} : 21.6mg/L (96h)(Fish)	EC_{50} : 10.9mg/L (48h)(Crustaceans)	ErC_{50} : 1600mg/L (96h)(Algae)
Methylcyclohexane	LC_{50} : 2.1mg/L (96h)(Fish)	EC_{50} : 0.33mg/L	ErC_{50} : 0.34mg/L

		(48h)(Crustaceans)	(72h)(Algae)
Cyclohexane	LC_{50} : 4.35mg/L (96h)(Fish)	No information available	No information available
Tetrachloroethylene	LC_{50} : 14mg/L (96h)(Fish)	EC_{50} : 1.3mg/L (48h)(Crustaceans)	ErC_{50} : 27mg/L (72h)(Algae)
o-xylene	LC_{50} : 16.1mg/L (96h)(Fish)	EC_{50} : 1.1mg/L (48h)(Crustaceans)	ErC_{50} : 0.80mg/L (72h)(Algae)
Heptane	LC_{50} :375mg/L (96h)(Fish)	No information available	No information available

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Octane	No information available	NOEC : 0.045mg/L(Crustaceans)	NOEC : 1.1mg/L(Algae)
Carbon tetrachloride	No information available	NOEC : 0.49mg/L(Crustaceans)	NOEC : 0.12mg/L(Algae)
Chlorobenzene	No information available	NOEC : 0.72mg/L(Crustaceans)	No information available
Methylcyclohexane	No information available	No information available	NOEC : 0.067mg/L(Algae)
Trichloroethylene	NOEC : 5.76mg/L(Fish)	NOEC : 2.1mg/L(Crustaceans)	NOEC : 45mg/L(Algae)
m-xylene	No information available	NOEC : 0.41mg/L(Crustaceans)	NOEC : 5.3mg/L(Algae)
Toluene	No information available	NOEC : 1.2mg/L(Crustaceans)	NOEC : 9.1mg/L(Algae)
1,4-dichlorobenzene	NOEC : 0.9mg/L(Fish)	NOEC : 0.10mg/L(Crustaceans)	NOEC : 0.83mg/L(Algae)
Tetrachloroethylene	NOEC : 1.9mg/L(Fish)	NOEC : 0.023mg/L(Crustaceans)	NOEC : 9.1mg/L(Algae)
p-xylene	No information available	NOEC : 1.3mg/L(Crustaceans)	NOEC : 4.4mg/L(Algae)
o-xylene	No information available	NOEC : 0.63mg/L(Crustaceans)	NOEC : 0.73mg/L(Algae)

12.2 Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Methanol	Low	Low
N-hexane	Low	Low
Heptane	Low	Low
Nonane	Low	Low
Tetrachloroethylene	High(Half-life = 720 days)	Medium(Half-life = 160.13 days)
p-xylene	High(Half-life = 360 days)	Low(Half-life = 1.75 days)
m-xylene	High(Half-life = 360 days)	Low(Half-life = 1.08 days)
o-xylene	High(Half-life = 360 days)	Low(Half-life = 1.83 days)
Hexadecane	Low	Low

12.3 Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Methanol	Low	BCF=10
N-hexane	Medium	Log Kow=3.9
Heptane	High	Log Kow=4.66
Nonane	High	Log Kow=5.65
Tetrachloroethylene	Low	BCF=77.1
p-xylene	Low	BCF=2.2
m-xylene	Low	BCF=1.37
o-xylene	Low	BCF=219
Hexadecane	Low	Log Kow=8.199

12.4 Mobility in soil

Component	log Koc	Remark
Methanol	0.000	
N-hexane	≥2.37 - ≤3.16	20 ℃， pH=7.0
Heptane	≥2.59 - ≤3.16	20 ℃， pH=7.0
Cyclohexane	2.89	20 ℃
Octane	≥3.16 - ≤3.956	20 ℃， pH=7.0
Carbon tetrachloride	2.06	20 ℃
Nonane	≥2.70 - ≤4.35	20 ℃， pH=7.0
Benzene	2.13	20 ℃
Trichloroethylene	2.15	
Chloroform	2.27	20 ℃
Tetrachloroethylene	2.15	20 ℃
Toluene	2.31	20 ℃
Ethylbenzene	3.12	20 ℃
p-xylene	2.73	20 ℃
m-xylene	2.73	20 ℃
o-xylene	2.73	20 ℃
Chlorobenzene	2.369	MCI method
Styrene	2.55	
Hexadecane	≥6.3779 - ≤7.5362	20 ℃， pH=7

12.5 Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Methanol	Not PBT/vPvB
N-hexane	Not PBT/vPvB
Heptane	Insufficient information, temporarily unable to evaluate

Cyclohexane	Not PBT/vPvB
Methylcyclohexane	Not PBT/vPvB
Octane	Not PBT/vPvB
Carbon tetrachloride	Not PBT/vPvB
Nonane	Not PBT/vPvB
Ethyl acetate	Not PBT/vPvB
Benzene	Not PBT/vPvB
Trichloroethylene	Not PBT/vPvB
Chloroform	Not PBT/vPvB
Tetrachloroethylene	Not PBT/vPvB
Toluene	Not PBT/vPvB
N-butyl acetate	Not PBT/vPvB
Ethylbenzene	Not PBT/vPvB
p-xylene	Not PBT/vPvB
m-xylene	Not PBT/vPvB
o-xylene	Not PBT/vPvB
Chlorobenzene	Not PBT/vPvB
Styrene	Not PBT/vPvB
1,4-dichlorobenzene	Not PBT/vPvB
Hexadecane	Not PBT/vPvB

12.6 Endocrine disrupting properties

Component	Endocrine disrupting properties
Methanol	No information available
N-hexane	No information available
Heptane	No information available
Cyclohexane	No information available
Methylcyclohexane	No information available
Octane	No information available
Carbon tetrachloride	No information available
Nonane	No information available
Ethyl acetate	No information available
Benzene	No information available
Trichloroethylene	No information available
Chloroform	No information available
Tetrachloroethylene	No information available
Toluene	No information available
N-butyl acetate	No information available

Ethylbenzene	No information available
p-xylene	No information available
m-xylene	No information available
o-xylene	No information available
Chlorobenzene	No information available
Styrene	No information available
1,4-dichlorobenzene	No information available
Hexadecane	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	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	Yes

IATA-DGR

14.1 UN number	1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	Yes

UN-ADR

14.1 UN number	1993

14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.
14.3 Transport hazard class	3
14.4 Packing group	Ⅱ
14.5 Environmental hazards (Yes or no)	Yes

Special precautions for user

	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
Methanol	√	√	√	√	√	√	√	√	√	√	√	√	√
N-hexane	√	√	√	√	√	√	√	√	√	√	√	√	√
Heptane	√	√	√	√	√	√	√	√	√	√	√	√	√
Cyclohexane	√	√	√	√	√	√	√	√	√	√	√	√	√
Methylcyclohexane	√	√	√	√	√	√	√	√	√	√	√	√	√
Octane	√	√	√	√	√	√	√	√	√	√	√	√	√
Carbon tetrachloride	√	√	√	√	√	√	√	√	√	√	√	√	√
Nonane	√	√	√	√	√	√	√	√	√	√	√	√	√
Ethyl acetate	√	√	√	√	√	√	√	√	√	√	√	√	√
Benzene	√	√	√	√	√	√	√	√	√	√	√	√	√
Trichloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
Chloroform	√	√	√	√	√	√	√	√	√	√	√	√	√

Tetrachloroethylene	√	√	√	√	√	√	√	√	√	√	√	√	√
Toluene	√	√	√	√	√	√	√	√	√	√	√	√	√
N-butyl acetate	√	√	√	√	√	√	√	√	√	√	√	√	√
Ethylbenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
p-xylene	√	√	√	√	√	√	√	√	√	√	√	√	√
m-xylene	√	√	√	√	√	√	√	√	√	√	√	√	√
o-xylene	√	√	√	√	√	√	√	√	√	√	√	√	√
Chlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
Styrene	√	√	√	√	√	√	√	√	√	√	√	√	√
1,4-dichlorobenzene	√	√	√	√	√	√	√	√	√	√	√	√	√
Hexadecane	√	√	√	√	√	√	√	√	√	×	×	√	√

【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
Methanol	×	×	×
N-hexane	×	×	×
Heptane	×	×	×
Cyclohexane	×	×	×
Methylcyclohexane	×	×	×
Octane	×	×	×
Carbon tetrachloride	√	×	×
Nonane	×	×	×
Ethyl acetate	×	×	×
Benzene	×	×	×
Trichloroethylene	×	×	×
Chloroform	×	×	×
Tetrachloroethylene	×	×	×
Toluene	×	×	×
N-butyl acetate	×	×	×

Ethylbenzene	×	×	×
p-xylene	×	×	×
m-xylene	×	×	×
o-xylene	×	×	×
Chlorobenzene	×	×	×
Styrene	×	×	×
1,4-dichlorobenzene	×	×	×
Hexadecane	×	×	×

【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
Methanol	×	×	√	√	√	√	×	×	×
N-hexane	×	×	×	√	√	√	×	×	×
Heptane	×	×	×	√	√	×	×	×	×
Cyclohexane	×	×	√	√	√	×	×	×	×
Methylcyclohexane	×	×	×	√	√	√	×	×	×
Octane	×	×	×	√	√	×	×	×	×
Carbon tetrachloride	×	×	×	√	√	√	×	×	×
Nonane	×	×	×	√	√	×	×	×	×
Ethyl acetate	×	×	×	√	√	×	×	×	×
Benzene	×	×	√	√	√	×	√	×	×
Trichloroethylene	√	√	√	√	√	×	×	×	×
Chloroform	×	×	√	√	√	×	√	×	×
Tetrachloroethylene	×	×	×	√	√	√	×	×	×
Toluene	×	×	√	√	√	√	×	×	×
N-butyl acetate	×	×	×	√	√	×	×	×	×
Ethylbenzene	×	×	×	√	√	×	×	×	×
p-xylene	×	×	×	√	√	√	×	×	×
m-xylene	×	×	×	√	√	√	×	×	×
o-xylene	×	×	×	√	√	√	×	×	×
Chlorobenzene	×	×	×	√	√	×	×	×	×
Styrene	×	×	×	√	√	×	×	×	×
1,4-dichlorobenzene	×	×	√	√	√	×	×	×	×
Hexadecane	×	×	×	√	√	×	×	×	×

[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
Methanol	WGK 2	
N-hexane	WGK 3	
Heptane	WGK 2	
Cyclohexane	WGK 2	
Methylcyclohexane	WGK 2	
Octane	WGK 2	
Carbon tetrachloride	WGK 3	
Ethyl acetate	WGK 1	
Benzene	WGK 3	
Trichloroethylene	WGK 3	
Chloroform	WGK 3	
Tetrachloroethylene	WGK 3	
Toluene	WGK 3	
N-butyl acetate	WGK 1	
Ethylbenzene	WGK 1	
p-xylene	WGK 2	
m-xylene	WGK 2	
o-xylene	WGK 2	
Chlorobenzene	WGK 2	
Styrene	WGK 2	
1,4-dichlorobenzene	WGK 2	
Hexadecane	WGK 1	

【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

Methanol	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	
N-hexane	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	
Heptane	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.	
Cyclohexane	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.	
Methylcyclohexane	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.	
Octane	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.	
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	
Nonane	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.	
Ethyl acetate	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.	
Benzene	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	
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	
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.	
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	
Toluene	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	
N-butyl acetate	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.	
Ethylbenzene	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.	
p-xylene	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.	
m-xylene	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.	
o-xylene	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.	
Styrene	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	
1,4-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	
Hexadecane	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.	

German technical rules for hazardous substances(TRGS)

Component	TRGS	Remark
Methanol	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	
N-hexane	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	
Heptane	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	
Cyclohexane	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	
Methylcyclohexane	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	
Octane	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	
Carbon tetrachloride	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Nonane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
Ethyl acetate	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	
Benzene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 410|TRGS 500|TRGS 509|TRGS 510|TRGS 800|TRGS 720|TRGS 721|TRGS 722|TRGS 723|TRGS 724	
Trichloroethylene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|TRGS 410|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	

Tetrachloroethylene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510	
Toluene	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	
N-butyl acetate	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	
Ethylbenzene	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	
p-xylene	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	
m-xylene	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	
o-xylene	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	
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	
Styrene	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	
1,4-dichlorobenzene	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 402|TRGS 401|TRGS 500|TRGS 509|TRGS 510|TRGS 800	
Hexadecane	TRGS 201|TRGS 400|TRGS 555|TRGS 600|TRGS 401|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	2026/01/13
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.