

Safety Data Sheet

22 Mix VOCs in acetonitrile

Version : V2.0.0.1

Report No. : BWQ8455-2016-MSDS-US

Creation Date : 2025/11/18

Revision Date : -



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

1 Identification

Product identifier

Product Name	22 Mix VOCs in acetonitrile
Cat No.	BWQ8455-2016
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

Recommended use of the product and restrictions on use

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

Details of the supplier of the Safety Data Sheet

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

Emergency phone number

Emergency phone number	010-58103678
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2 Hazard(s) identification

Hazard classification according to 29 CFR 1910.1200

Flammable liquids	Category 2
Acute Toxicity - Oral	Category 4
Acute Toxicity - Dermal	Category 4
Serious eye damage/irritation	Category 2
Acute Toxicity - Inhalation	Category 4

Label elements

Hazard pictograms	 
Signal word	Danger

Hazard statements

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H312	Harmful in contact with skin
H319	Causes serious eye irritation
H332	Harmful if inhaled

Precautionary statements

◆ Prevention

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.
P261	Avoid breathing 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 with adequate ventilation.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

◆ Response

P321	Specific treatment (see information on this label and safety data sheet).
P330	Rinse mouth.
P302+P352	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P362+P364	Take off 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

P403+P235	Store in a well-ventilated place. Keep cool.
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◆ Disposal

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

	Not applicable.
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Hazard description

Physical and chemical hazards

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

Inhaled	Sore throat. Weakness. Abdominal pain. Laboured breathing. Convulsions. Unconsciousness. Vomiting. Symptoms may be delayed.
Ingestion	(Further see Inhalation).
Skin Contact	Redness.
Eye	Redness. Pain.

Environmental hazards

	Please refer to 12th chapter of SDS.
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3 Composition/information on ingredients

Substance/mixture

	Mixture
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Component	CAS No.	EC No.	Concentration (wt, %)
Acetonitrile	75-05-8	200-835-2	99.7184
Ethanol	64-17-5	200-578-6	0.0128
Methanol	67-56-1	200-659-6	0.0128
Propan-1-ol	71-23-8	200-746-9	0.0128
Propan-2-ol	67-63-0	200-661-7	0.0128
Butan-1-ol	71-36-3	200-751-6	0.0128
2-methylpropan-1-ol	78-83-1	201-148-0	0.0128
Benzene	71-43-2	200-753-7	0.0128
Toluene	108-88-3	203-625-9	0.0128
Ethylbenzene	100-41-4	202-849-4	0.0128
Xylene	1330-20-7	215-535-7	0.0128
Triethylamine	121-44-8	204-469-4	0.0128
2-dimethylaminoethanol	108-01-0	203-542-8	0.0128
2-amino-2-methylpropanol	124-68-5	204-709-8	0.0128
Ethane-1,2-diol	107-21-1	203-473-3	0.0128
1,2-Propanediol	57-55-6	200-338-0	0.0128
Propane-1,3-diol	504-63-2	207-997-3	0.0128
2,2'-oxydiethanol	111-46-6	203-872-2	0.0128
2-butoxyethanol	111-76-2	203-905-0	0.0128

2-(2-butoxyethoxy)ethanol	112-34-5	203-961-6	0.0128
2-(2-ethoxyethoxy)ethyl acetate	112-15-2	203-940-1	0.0128
2-(2-butoxyethoxy)ethyl acetate	124-17-4	204-685-9	0.0128
2,2,4-trimethylpentane-1,3-diol	144-19-4	205-619-1	0.0128

4 First-aid measures

Description of first aid measures

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

Most important symptoms/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.
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Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Small fire: dry chemical, CO ₂ or alcohol-resistant foam; Large fire: alcohol-resistant foam; Fire involving tanks, rail tank cars or highway tanks: Fight fire from maximum distance or use unmanned master stream devices or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out.
Unsuitable extinguishing media	Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the substance or mixture

1	Will form explosive mixtures with air.
2	Fire exposed containers may vent contents through pressure relief valves thereby increasing fire intensity and/or vapour concentration.
3	Vapours may travel to source of ignition and flash back.
4	Liquid and vapour are flammable.
5	May emit poisonous fumes on fire.
6	Development of hazardous combustion gases or vapor possible in the event of fire.
7	May expansion or decompose explosively when heated or involved in fire.

Special protective equipment and precautions for fire-fighters

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

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

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

Environmental precautions

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

Methods and materials for containment and cleaning up

1	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-static clothing.
2	In case of small amount of spillage, use clean non sparking tools to collect absorption materials.
3	In case of large amount of spillage, construct cofferdam or dig a hole to collect the spillage. Use foam cover to reduce evaporation. Water spray mist can reduce evaporation, but can not reduce the flammability of the leakage in the restricted space.
4	Collect absorbent material using a clean, non-sparking tool.
5	Cover with anti-solvent foam to reduce evaporation.
6	Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.
7	Water spray reduces evaporation but does not reduce the flammability of spills in confined spaces.
8	Do not touch or cross spills.
9	It is recommended that emergency personnel wear positive pressure self-contained breathing apparatus and wear anti-virus suits.
10	Spray water disperses the vapor and dilutes the liquid spill.
11	Do not touch broken containers and spills before putting on appropriate protective clothing.
12	Cut off the source of the leak as much as possible.
13	Keep leaks in a ventilated place.
14	Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
15	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
16	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in

	container.
17	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

7 Handling and storage

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

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

8 Exposure controls/personal protection

Control parameters

◆ Occupational exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m ³	ppm	mg/m ³
Acetonitrile	Permissible exposure standards for workers in the workplace	40	67	60	100.5
	Australia	40	67	60	101
	Canada - Ontario	20	-	-	-
	European Union	40	70	-	-
	New Zealand	40	67	60	101
	USA - ACGIH	20	-	-	-
Ethanol	Permissible exposure standards for workers in the workplace	1000	1880	1000	1880
	Australia	1000	1880	-	-
	Canada - Ontario	-	-	1000	-
	New Zealand	1000	1880	-	-
	USA - ACGIH	-	-	1000	-
	USA - NIOSH	1000	1900	-	-

Methanol	Japan - JSOH(2024–2025)	200	260	-	-
	Permissible exposure standards for workers in the workplace	200	262	250	327.5
	Australia	200	262	250	328
	Canada - Ontario	200	-	250	-
	European Union	200	260	-	-
	New Zealand	200	262	250	328
Propan-1-ol	Permissible exposure standards for workers in the workplace	200	491	250	613.75
	Australia	200	492	250	614
	Canada - Ontario	100	-	-	-
	New Zealand	200	492	250	614
	USA - ACGIH	100	-	-	-
	USA - NIOSH	200	500	250	625
Propan-2-ol	Japan - JSOH(2024–2025)	-	-	-	-
	Permissible exposure standards for workers in the workplace	400	983	500	1228.75
	Australia	400	983	500	1230
	Canada - Ontario	200	-	400	-
	New Zealand	400	983	500	1230
	USA - ACGIH	200	-	400	-
Butan-1-ol	Japan - JSOH(2024–2025)	-	-	-	-
	Permissible exposure standards for workers in the workplace	100	303	125	378.75
	Australia	-	-	50	152
	Canada - Ontario	20	-	-	-
	New Zealand	-	-	50	150
	USA - ACGIH	20	-	-	-
2-methylpropan-1-ol	Japan - JSOH(2024–2025)	50	150	-	-
	Permissible exposure	50	152	75	190

	standards for workers in the workplace				
	Canada - Ontario	50	-	-	-
	New Zealand	50	152	-	-
	USA - ACGIH	50	-	-	-
	USA - NIOSH	50	150	-	-
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
	Australia	1	3.2	-	-
	Canada - Ontario	0.5	-	2.5	-
	European Union	0.2	0.66	-	-
	New Zealand	0.05	0.16	-	-
Toluene	Japan - JSOH(2024–2025)	50	188	-	-
	Permissible exposure standards for workers in the workplace	50	188	75	235
	Australia	50	191	150	574
	Canada - Ontario	20	-	-	-
	European Union	50	192	100	384
	New Zealand	20	75	100	377
Ethylbenzene	Japan - JSOH(2024–2025)	20	87	-	-
	Permissible exposure standards for workers in the workplace	100	434	125	542.5
	Australia	100	434	125	543
	Canada - Ontario	20	-	-	-
	European Union	100	442	200	884
	New Zealand	20	88	40	176
Xylene	Japan - JSOH(2024–2025)	50	217	-	-
	Permissible exposure standards for workers in the	100	434	125	542.5

	workplace				
	Australia	80	350	150	655
	Canada - Ontario	100	-	150	-
	European Union	50	221	100	442
	New Zealand	50	217	-	-
Triethylamine	Permissible exposure standards for workers in the workplace	10	41	15	61.5
	Australia	2	8	4	17
	Canada - Ontario	0.5	-	1	-
	European Union	2	8.4	3	12.6
	New Zealand	3	12	5	20
	USA - ACGIH	0.5	-	1	1
2-dimethylaminoethanol	Canada - Ontario	3	11	6	22
	New Zealand	2	7.4	6	22
	Denmark	10(provisional)	-	-	-
	Latvia	-	5	-	-
	United Kingdom	2	7.4	6	22
2-amino-2-methylpropanol	Germany (AGS)	1	3.7	2	7.4
	Germany (DFG)	1	3.7	2	7.4
	Switzerland	2.4	8.7	4.8	17.4
Ethane-1,2-diol	Permissible exposure standards for workers in the workplace	-	10(mist)	-	15(mist)
	Permissible exposure standards for workers in the workplace	-	-	-	-
	Australia	20(vapour)	52(vapour)	40(vapour)	104(vapour)
	Canada - Ontario	-	-	-	100
	European Union	20	52	40	104
	New Zealand	-	-	50	127
1,2-Propanediol	Australia	-	10	-	-
	Canada - Ontario	-	10(particulates)	-	-
	New Zealand	150	474	-	-
	Ireland	150(vapour and particulates)	470(vapour and particulates)	-	-
	Latvia	-	7	-	-

	Norway	25	79	-	-
2,2'-oxydiethanol	Australia	23	100	-	-
	New Zealand	10	44	40	176
	Austria	10	44	40	176
	Denmark	2.5	11	5	22
	Germany (AGS)	10	44	40	176
	Germany (DFG)	10	44	40	176
2-butoxyethanol	Japan - JSOH(2024–2025)	-	-	-	-
	Permissible exposure standards for workers in the workplace	25	121	37.5	151.25
	Australia	20	96.9	50	242
	Canada - Ontario	20	-	-	-
	European Union	20	98	50	246
	New Zealand	25	121	-	-
2-(2-butoxyethoxy)ethanol	European Union	10	67.5	15	101.2
	USA - ACGIH	10(inhalable fraction and vapor)	-	-	-
	Austria	10	67.5	15	101.2
	Belgium	10	67.5	15	101.2
	Denmark	10	68	20	136
	Finland	10	68	-	-
2-(2-ethoxyethoxy)ethyl acetate	Sweden	15	110	30	220
2-(2-butoxyethoxy)ethyl acetate	Germany (AGS)	10	67	15	100
	Germany (DFG)	10	85	15	127.5
	Sweden	15	130	30	250
	Switzerland	10	85	15	127.5

Engineering controls

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

Personal protection equipment

General requirement	    
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Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear anti static chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.
Skin and body protection	Must wear anti static chemical protective clothing and anti static shoes.

9 Physical and chemical properties and safety characteristics

Physical and chemical properties

Appearance (physical state, color, etc.)	clear or clear yellow liquid
Odor	No information available
Odor threshold	No information available
pH	No information available
Melting point/freezing point(°C)	-46 (Acetonitrile)
Initial boiling point and boiling range(°C)	82 (Acetonitrile)
Flash point(Closed cup, °C)	2 (Acetonitrile)
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit : 17 (Acetonitrile); Lower limit : 3 (Acetonitrile)
Vapor pressure	9.9kPa (25°C, Acetonitrile)
Vapor density(Air = 1)	1.4 (Acetonitrile)
Relative density(Water=1)	0.8 (Acetonitrile)
Solubility	1000000mg/L (25 °C, Acetonitrile)
n-octanol/water partition coefficient	-0.3 (Acetonitrile)
Auto-ignition temperature(°C)	524 (Acetonitrile)
Decomposition temperature(°C)	No information available
Kinematic viscosity	No information available

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	In contact with N-halogen compounds may cause a potensive explosive hazardous. In contact with oxidants causes severe reactions, and may cause a fire or explosion. In contact with halides may cause an active reaction. In contact with oxidants, anhydrides, metals, metal oxides / KMnO4 metal salts, nitro-compounds may cause a fire or explosion.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	N - halogenated compounds, sulfuric acid and strong oxidants. Oxidants, alkali metals, alkaline earth metals and aluminum. Halides, oxidants and halogen. Oxidants, halogen, anhydrides, acids, metals, metal oxides, potassium permanganate, nitro-compounds and metal salts.
Hazardous decomposition	Under normal conditions of storage and use, hazardous decomposition products

products	should not be produced.
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11 Toxicological information

Acute toxicity

Component	LD ₅₀ (oral)	LD ₅₀ (dermal)	LC ₅₀ (inhalation,4h)
Acetonitrile	2460mg/kg(Rat)	> 2000mg/kg(Rabbit)	4.748mg/L(Rabbit)
Butan-1-ol	790mg/kg(Rat)	3400mg/kg(Rabbit)	24.252mg/L(Rat)
Ethylbenzene	3500mg/kg(Rat)	15400mg/kg(Rabbit)	No information available
Triethylamine	460mg/kg(Rat)	415mg/kg(Rabbit)	No information available
Xylene	4300mg/kg(Rat)	> 1700mg/kg(Rabbit)	21.712mg/L(Rat)
Ethane-1,2-diol	4700mg/kg(Rat)	10600mg/kg(Rabbit)	No information available
2,2'-oxydiethanol	12565mg/kg(Rat)	11890mg/kg(Rabbit)	No information available
Propan-1-ol	1870mg/kg(Rat)	5040mg/kg(Rabbit)	No information available
2-butoxyethanol	470mg/kg(Rat)	> 2000mg/kg(Rat)	2.174mg/L(Rat)
Toluene	636mg/kg(Rat)	12200mg/kg(Rabbit)	49mg/L(Rat)
Methanol	5628mg/kg(Rat)	15800mg/kg(Rabbit)	83.867mg/L(Rat)
2-(2-butoxyethoxy)ethanol	5660mg/kg(Rat)	2700mg/kg(Rabbit)	No information available
2-methylpropan-1-ol	2460mg/kg(Rat)	3400mg/kg(Rabbit)	No information available
2-amino-2-methylpropan-1-ol	2900mg/kg(Rat)	No information available	No information available
2-(2-ethoxyethoxy)ethyl acetate	11000mg/kg(Rat)	15300mg/kg(Rabbit)	No information available
2-(2-butoxyethoxy)ethyl acetate	6500mg/kg(Rat)	14500mg/kg(Rabbit)	72.5mg/L(Rat)
Ethanol	7060mg/kg(Rat)	No information available	39mg/L(Mouse)
Benzene	930mg/kg(Rat)	> 8260mg/kg(Rabbit)	No information available
1,2-Propanediol	20000mg/kg(Rat)	20800mg/kg(Rabbit)	No information available
Propan-2-ol	5045mg/kg(Rat)	12800mg/kg(Rabbit)	No information available
2,2,4-trimethylpentane-1,3-diol	2000mg/kg(Rat)	5900mg/kg(Rabbit)	No information available
2-dimethylaminoethanol	2000mg/kg(Rat)	1220mg/kg(Rabbit)	5.983mg/L(Rat)

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP	OSHA Carcinogen List
Acetonitrile	Not Listed	Not Listed	Not Listed
Ethanol	Category 1(Remark 1)	Not Listed	Not Listed
Methanol	Not Listed	Not Listed	Not Listed
Propan-1-ol	Not Listed	Not Listed	Not Listed
Propan-2-ol	Category 3	Not Listed	Not Listed
Butan-1-ol	Not Listed	Not Listed	Not Listed

2-methylpropan-1-ol	Not Listed	Not Listed	Not Listed
Benzene	Category 1	Category K	Listed
Toluene	Category 3	Not Listed	Not Listed
Ethylbenzene	Category 2B	Not Listed	Not Listed
Xylene	Category 3	Not Listed	Not Listed
Triethylamine	Not Listed	Not Listed	Not Listed
2-dimethylaminoethanol	Not Listed	Not Listed	Not Listed
2-amino-2-methylpropanol	Not Listed	Not Listed	Not Listed
Ethane-1,2-diol	Not Listed	Not Listed	Not Listed
1,2-Propanediol	Not Listed	Not Listed	Not Listed
Propane-1,3-diol	Not Listed	Not Listed	Not Listed
2,2'-oxydiethanol	Not Listed	Not Listed	Not Listed
2-butoxyethanol	Category 3	Not Listed	Not Listed
2-(2-butoxyethoxy)ethanol	Not Listed	Not Listed	Not Listed
2-(2-ethoxyethoxy)ethyl acetate	Not Listed	Not Listed	Not Listed
2-(2-butoxyethoxy)ethyl acetate	Not Listed	Not Listed	Not Listed
2,2,4-trimethylpentane-1,3-diol	Not Listed	Not Listed	Not Listed

Remark 1: for alcoholic beverages only

Others

22 Mix VOCs in acetonitrile	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
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	Based on available data, the classification criteria are not met
STOT-single exposure	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Acetonitrile	LC ₅₀ : > 100mg/L (96h)(Fish)	EC ₅₀ : > 1000mg/L (48h)(Crustaceans)	ErC ₅₀ : >700mg/L (72h)(Algae)
Butan-1-ol	LC ₅₀ : >100mg/L (96h)(Fish)	EC ₅₀ : >1000mg/L (48h)(Crustaceans)	ErC ₅₀ : >1000mg/L (72h)(Algae)
Ethylbenzene	LC ₅₀ : 4.2mg/L (96h)(Fish)	EC ₅₀ : 4.75mg/L	ErC ₅₀ : 3.6mg/L

		(48h)(Crustaceans)	(96h)(Algae)
Triethylamine	LC ₅₀ : 24mg/L (96h)(Fish)	EC ₅₀ : 34mg/L (48h)(Crustaceans)	ErC ₅₀ : 8.0mg/L (72h)(Algae)
Xylene	LC ₅₀ : 2.6mg/L (96h)(Fish)	No information available	No information available
Ethane-1,2-diol	LC ₅₀ : >100mg/L (96h)(Fish)	EC ₅₀ : >1100mg/L (48h)(Crustaceans)	ErC ₅₀ : >1000mg/L (72h)(Algae)
Propan-1-ol	LC ₅₀ : 4555mg/L (96h)(Fish)	EC ₅₀ : 4130mg/L (48h)(Crustaceans)	ErC ₅₀ : 4480mg/L (96h)(Algae)
Propane-1,3-diol	LC ₅₀ : 9720mg/L (96h)(Fish)	EC ₅₀ : 7417mg/L (48h)(Crustaceans)	ErC ₅₀ : 1 600mg/L (72h)(Algae)
2,2'-oxydiethanol	LC ₅₀ : 75200mg/L (96h)(Fish)	No information available	No information available
2-butoxyethanol	LC ₅₀ : 1370mg/L (96h)(Fish)	EC ₅₀ : >1000mg/L (48h)(Crustaceans)	ErC ₅₀ : >1000mg/L (72h)(Algae)
Toluene	LC ₅₀ : 25mg/L (96h)(Fish)	EC ₅₀ : 4.1mg/L (48h)(Crustaceans)	ErC ₅₀ : 29mg/L (72h)(Algae)
Methanol	LC ₅₀ : 24000mg/L (96h)(Fish)	EC ₅₀ : 24500mg/L (48h)(Crustaceans)	No information available
2-(2-butoxyethoxy)ethanol	LC ₅₀ : 1300mg/L (96h)(Fish)	No information available	No information available
2-methylpropan-1-ol	LC ₅₀ : 1510mg/L (96h)(Fish)	EC ₅₀ : 1200mg/L (48h)(Crustaceans)	No information available
2-amino-2-methylpropanol	LC ₅₀ : 200mg/L (96h)(Fish)	No information available	No information available
2-(2-ethoxyethoxy)ethyl acetate	LC ₅₀ : 110mg/L (96h)(Fish)	No information available	No information available
2-(2-butoxyethoxy)ethyl acetate	LC ₅₀ : 60mg/L (96h)(Fish)	No information available	No information available
Ethanol	LC ₅₀ : 11200mg/L (96h)(Fish)	EC ₅₀ : 9950mg/L (48h)(Crustaceans)	No information available
Benzene	LC ₅₀ : 21.6mg/L (96h)(Fish)	EC ₅₀ : 10.9mg/L (48h)(Crustaceans)	ErC ₅₀ : 1600mg/L (96h)(Algae)
1,2-Propanediol	LC ₅₀ : > 100mg/L (96h)(Fish)	EC ₅₀ : >1000mg/L (48h)(Crustaceans)	ErC ₅₀ : >1000mg/L (72h)(Algae)
Propan-2-ol	LC ₅₀ : 9640mg/L (96h)(Fish)	EC ₅₀ : >1000mg/L (48h)(Crustaceans)	ErC ₅₀ : >1000mg/L (72h)(Algae)
2,2,4-trimethylpentane-1,3-diol	LC ₅₀ : > 700mg/L (96h)(Fish)	EC ₅₀ : > 109.1mg/L (48h)(Crustaceans)	ErC ₅₀ : > 110.1mg/L (72h)(Algae)
2-dimethylaminoethanol	LC ₅₀ : 146.63mg/L (96h)(Fish)	EC ₅₀ : 98.37mg/L (48h)(Crustaceans)	ErC ₅₀ : 66.08mg/L (72h)(Algae)

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Acetonitrile	NOEC : 102mg/L(Fish)	NOEC : >960mg/L(Crustaceans)	NOEC : 700mg/L(Algae)
Butan-1-ol	NOEC : 46mg/L(Fish)	NOEC : 4.1mg/L(Crustaceans)	NOEC : 180mg/L(Algae)
Triethylamine	No information available	NOEC : 11mg/L(Crustaceans)	NOEC : 1.1mg/L(Algae)
Ethane-1,2-diol	No information available	NOEC :	NOEC : 1000mg/L(Algae)

		100mg/L(Crustaceans)	
2-butoxyethanol	No information available	NOEC : >100mg/L(Crustaceans)	NOEC : 130mg/L(Algae)
Toluene	No information available	NOEC : 1.2mg/L(Crustaceans)	NOEC : 9.1mg/L(Algae)
1,2-Propanediol	NOEC : >100mg/L(Fish)	NOEC : 1000mg/L(Crustaceans)	NOEC : 1000mg/L(Algae)
Propan-2-ol	NOEC : > 100mg/L(Fish)	NOEC : >100mg/L(Crustaceans)	NOEC : 1000mg/L(Algae)

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Ethanol	Low(Half-life = 2.17 days)	Low(Half-life = 5.08 days)
Methanol	Low	Low
Butan-1-ol	Low(Half-life = 54 days)	Low(Half-life = 3.65 days)
Xylene	High(Half-life = 360 days)	Low(Half-life = 1.83 days)
2-amino-2-methylpropanol	Low	Low
Ethane-1,2-diol	Low(Half-life = 24 days)	Low(Half-life = 3.46 days)
1,2-Propanediol	Low	Low
2,2'-oxydiethanol	Low	Low
2-(2-butoxyethoxy)ethanol	Low	Low
2-(2-butoxyethoxy)ethyl acetate	Low	Low
2,2,4-trimethylpentane-1,3-diol	Low	Low

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Ethanol	Low	Log Kow=-0.31
Methanol	Low	BCF=10
Butan-1-ol	Low	BCF=64
Xylene	Medium	BCF=740
2-amino-2-methylpropanol	Low	BCF=330
Ethane-1,2-diol	Low	BCF=200
1,2-Propanediol	Low	BCF=1
2,2'-oxydiethanol	Low	BCF=180
2-(2-butoxyethoxy)ethanol	Low	BCF=46
2-(2-butoxyethoxy)ethyl acetate	Low	Log Kow=2.9
2,2,4-trimethylpentane-1,3-diol	Low	Log Kow=1.24

Mobility in soil

Component	log Koc	Remark
Acetonitrile	0.653	
Ethanol	0	
Methanol	0.000	
Propan-2-ol	0.54	20 °C
Butan-1-ol	0.54	20 °C
Benzene	2.13	20 °C
Toluene	2.31	20 °C
Ethylbenzene	3.12	20 °C
Xylene	2.73	
Triethylamine	2.03	20 °C
2-dimethylaminoethanol	0.09	20 °C
2-amino-2-methylpropanol	0.083	log Kow method
Ethane-1,2-diol	0.000	
1,2-Propanediol	0.46	20 °C
Propane-1,3-diol	-0.47	20 °C
2,2'-oxydiethanol	0.000	
2-(2-butoxyethoxy)ethanol	1.000	
2-(2-ethoxyethoxy)ethyl acetate	1.354	
2-(2-butoxyethoxy)ethyl acetate	1.000	
2,2,4-trimethylpentane-1,3-diol	0.000	

13 Disposal considerations

| Disposal considerations

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

14 Transport information

| Label and Mark

Transporting Label	 
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| IMDG-CODE

UN number	1992
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UN proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	II
Marine pollutant (Yes or no)	No

IATA-DGR

UN number	1992
UN proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	II

UN-ADR

UN number	1992
UN proper shipping name	FLAMMABLE LIQUID, TOXIC, N.O.S.
Transport hazard class	3
Transport subsidiary hazard class	6.1
Packing group	II

Transport in bulk according to IMO instruments

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

	Not Available
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- ◆ Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

	Not Available
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- ◆ Transport in bulk in accordance with the IGC Code

	Not Available
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Others

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

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
Acetonitrile	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Methanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Propan-1-ol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Propan-2-ol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Butan-1-ol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-methylpropan-1-ol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Benzene	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Toluene	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethylbenzene	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Xylene	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Triethylamine	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-dimethylaminoethanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-amino-2-methylpropanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethane-1,2-diol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1,2-Propanediol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Propane-1,3-diol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2,2'-oxydiethanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-butoxyethanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-(2-butoxyethoxy)ethanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-(2-ethoxyethoxy)ethyl acetate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-(2-butoxyethoxy)ethyl acetate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2,2,4-trimethylpentane-1,3-diol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

- [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
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Acetonitrile	×	×	×
Ethanol	×	×	×
Methanol	×	×	×
Propan-1-ol	×	×	×
Propan-2-ol	×	×	×
Butan-1-ol	×	×	×
2-methylpropan-1-ol	×	×	×
Benzene	×	×	×
Toluene	×	×	×
Ethylbenzene	×	×	×
Xylene	×	×	×
Triethylamine	×	×	×
2-dimethylaminoethanol	×	×	×
2-amino-2-methylpropano I	×	×	×
Ethane-1,2-diol	×	×	×
1,2-Propanediol	×	×	×
Propane-1,3-diol	×	×	×
2,2'-oxydiethanol	×	×	×
2-butoxyethanol	×	×	×
2-(2-butoxyethoxy)ethano I	×	×	×
2-(2-ethoxyethoxy)ethyl acetate	×	×	×
2-(2-butoxyethoxy)ethyl acetate	×	×	×
2,2,4-trimethylpentane-1,3 -diol	×	×	×

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer

【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)

【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

US chemical inventory

Component	A	B	C	D	E	F	G	H
Acetonitrile	✓	×	✓	✓	✓	✓	✓	×
Ethanol	×	×	×	✓	✓	✓	✓	×
Methanol	✓	×	✓	✓	✓	✓	✓	✓
Propan-1-ol	×	×	×	✓	✓	✓	✓	×
Propan-2-ol	×	×	×	✓	✓	✓	✓	×
Butan-1-ol	×	×	✓	✓	✓	✓	✓	×
2-methylpropan-1-ol	×	×	✓	✓	✓	✓	✓	×
Benzene	✓	×	✓	✓	✓	✓	✓	✓

Toluene	✓	×	✓	✓	✓	✓	✓	✓
Ethylbenzene	✓	×	✓	✓	✓	✓	✓	✓
Xylene	✓	×	✓	✓	✓	✓	✓	×
Triethylamine	✓	×	✓	✓	✓	✓	✓	×
2-dimethylaminoethanol	×	×	×	✓	✓	✓	×	×
2-amino-2-methylpropanol	×	×	×	✓	✓	✓	×	×
Ethane-1,2-diol	✓	×	✓	✓	✓	✓	✓	✓
1,2-Propanediol	×	×	×	×	✓	✓	×	×
Propane-1,3-diol	×	×	×	×	×	×	×	×
2,2'-oxydiethanol	×	×	×	×	×	✓	×	×
2-butoxyethanol	×	×	×	✓	✓	✓	✓	×
2-(2-butoxyethoxy)ethanol	×	×	×	×	×	×	×	×
2-(2-ethoxyethoxy)ethyl acetate	×	×	×	×	×	×	×	×
2-(2-butoxyethoxy)ethyl acetate	×	×	×	×	×	×	×	×
2,2,4-trimethylpentane-1,3-diol	×	×	×	×	×	×	×	×

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

Note:

- “✓” Indicates that the substance included in the regulations.
 “×” No data or not included in the regulations.

16 Other information

Information on revision

Creation Date	2025/11/18
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.chemportal.org/chemportal/>.
 [4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>.
 [5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>.
 [6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>.
 [7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>.
 [8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

Abbreviations and acronyms

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

Disclaimer

This Safety Data Sheet (SDS) was prepared according to OSHA HCS -2024. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.