

Safety Data Sheet

6 Mix alcohols and esters in ethanol:water

Version : V2.0.0.1

Report No. : BWQ9498-2016-MSDS-EP

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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	6 Mix alcohols and esters in ethanol:water
Cat No.	BWQ9498-2016
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
Serious eye damage/irritation	Category 1

2.2 Label elements

Hazard pictograms	 
Signal word	Danger

Hazard statements

H225	Highly flammable liquid and vapour
H318	Causes serious eye damage
EUH066	Repeated exposure may cause skin dryness or cracking

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

Response

P310	Immediately call a POISON CENTER/doctor.
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/international regulations.
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2.3 Other hazards

Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Ethyl acetate	Not PBT/vPvB
Ethyl hexanoate	Not PBT/vPvB
Ethyl lactate	Insufficient information, temporarily unable to evaluate
Ethyl butyrate	Not PBT/vPvB
Propan-1-ol	Insufficient information, temporarily unable to evaluate

2-phenylethanol	Not PBT/vPvB
Ethanol	Not PBT/vPvB
Water	Insufficient information, temporarily unable to evaluate

◆ Results of endocrine disrupting properties assessment

Component	Results of endocrine disrupting properties assessment [according to (EU) No 2017/2100 or (EU) No 2018/605]
Ethyl acetate	Insufficient information, temporarily unable to evaluate
Ethyl hexanoate	Insufficient information, temporarily unable to evaluate
Ethyl lactate	Insufficient information, temporarily unable to evaluate
Ethyl butyrate	Insufficient information, temporarily unable to evaluate
Propan-1-ol	Insufficient information, temporarily unable to evaluate
2-phenylethanol	Insufficient information, temporarily unable to evaluate
Ethanol	Insufficient information, temporarily unable to evaluate
Water	Insufficient information, temporarily unable to evaluate

◆ Other

	Not applicable.
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3 Composition/information on ingredients

3.1 Substance

	Not applicable
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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
Ethyl acetate CAS : 141-78-6 EC : 205-500-4 Index No. : 607-022-00-5	2.72	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	-
Ethyl hexanoate CAS : 123-66-0 EC : 204-640-3 Index No. : -	2.72	Flammable liquids, Category 3, H226; Skin Corrosion/Irritation, Category 2, H315	-
Ethyl lactate CAS : 97-64-3 EC : 202-598-0 Index No. : 607-129-00-7	2.72	Flammable liquids, Category 3, H226; Serious eye damage/irritation, Category 1, H318; Specific target organ toxicity - single exposure; respiratory tract irritation, Category 3, H335	-
Ethyl butyrate CAS : 105-54-4 EC : 203-306-4 Index No. : -	0.27	Flammable liquids, Category 3, H226; Serious eye damage/irritation, Category 2, H319	-
Propan-1-ol CAS : 71-23-8 EC : 200-746-9 Index No. : 603-003-00-0	1.09	Flammable liquids, Category 2, H225; Serious eye damage/irritation, Category 1, H318; Specific target organ toxicity - single exposure; narcotic effects, Category 3, H336	-

2-phenylethanol CAS : 60-12-8 EC : 200-456-2 Index No. : -	0.054	Acute Toxicity - Oral, Category 4, H302; Serious eye damage/irritation, Category 2, H319	-
Ethanol CAS : 64-17-5 EC : 200-578-6 Index No. : 603-002-00-5	45.213	Flammable liquids, Category 2, H225	-
Water CAS : 7732-18-5 EC : 231-791-2 Index No. : -	45.213	Not Classified	-

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	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.
Skin contact	Take off contaminated clothing and shoes immediately. Wash off with plenty of soap and water for at least 15 minutes and consult a physician if feel uncomfortable.
Ingestion	Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Inhalation	Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

4.2 Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
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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.
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2	Disposal considerations advice is contained in Section 13 of the SDS.
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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.
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◆ 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.
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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/m ³	ppm	mg/m ³
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
Ethyl lactate	Denmark	10(provisional)	-	-	-
	Finland	5	25	10	49
	Sweden	5	25	10	50
Propan-1-ol	Permissible exposure standards for workers in the workplace	200	491	250	613.75
	France	200	500	-	-
	United Kingdom	200	500	250	625
	Austria	200	500	-	-
	Belgium	100	250	-	-
	Denmark	200	500	400	1000
2-phenylethanol	USA - ACGIH	0.5	-	-	-
Ethanol	Permissible exposure standards for workers in the workplace	1000	1880	1000	1880
	France	1000	1900	5000	9500
	Germany (AGS)	200	380	800	1520
	Germany (DFG)	200	380	800	1520
	United Kingdom	1000	1920	-	-
	Austria	1000	1900	2000	3800

◆ Biological limit values

Biological limit values	No relevant regulations
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◆ 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)
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
Ethyl hexanoate	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
Ethyl lactate	Inhalation	No data available	No data available	No data available	7.053 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 butyrate	Inhalation	No data available	No data available	No data available	49.3 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
Propan-1-ol	Inhalation	No data available	No data available	No data available	268 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
2-phenylethanol	Inhalation	No data available	No data available	No data available	59.9 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
Ethanol	Inhalation	No data available	No data available	No data available	380 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
Water	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
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
Ethyl hexanoate	6.74 µg/L	674 ng/L	10 mg/L	136 µg/kg sediment dw	13.6 µg/kg sediment dw	No hazard identified	23.2 µg/kg soil dw	No potential for bioaccumulation
Ethyl lactate	284.312 µg/L	28.431 µg/L	100 mg/L	1.071 mg/kg sediment dw	107.116 µg/kg sediment dw	No hazard identified	67.795 µg/kg soil dw	No data available
Ethyl butyrate	29.7 µg/L	2.97 µg/L	23.6 mg/L	173 µg/kg sediment dw	17.3 µg/kg sediment dw	No hazard identified	17.1 µg/kg soil dw	No potential for bioaccumulation
Propan-1-ol	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
2-phenylethanol	215 µg/L	21.5 µg/L	10 mg/L	1.454 mg/kg sediment dw	145.4 µg/kg sediment dw	No hazard identified	164 µg/kg soil dw	No potential for bioaccumulation
Ethanol	960 µg/L	790 µg/L	580 mg/L	3.6 mg/kg sediment	2.9 mg/kg sediment	No hazard identified	630 µg/kg soil dw	380 - 720 mg/kg food

				dw	dw			
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 anti-corrosion goggles.
Hand protection	Must wear acid and alkali resistant 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.

8.2.3 Environmental exposure controls

Environmental exposure controls	No information available
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9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	colorless liquid
Colour	colorless liquid
Odor	No information available
Odor threshold	No information available
pH	7.0 (20°C, 10g/L,Ethanol)
Melting point/freezing point(°C)	-114 (Ethanol)
Initial boiling point and boiling range(°C)	78 (Ethanol)
Flash point(Closed cup,°C)	12 (Ethanol)
Evaporation rate	No information available
Flammability	No information available
Upper/lower explosive limits[% (v/v)]	Upper limit : 27.7 (Ethanol); Lower limit : 3.1 (Ethanol)
Vapor pressure	5.8kPa (20°C,Ethanol)
Vapor density(Air = 1)	1.6 (Ethanol)

Relative density(Water=1)	0.79 (Ethanol)
Solubility	789g/L (20 °C,Ethanol)
n-octanol/water partition coefficient	-0.32 (Ethanol)
Auto-ignition temperature(°C)	400 (Ethanol)
Decomposition temperature(°C)	≥700 (Ethanol)
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Particle characteristics	Not applicable

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Information with regard to physical hazard classes	No information available
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9.2.2 Other safety characteristics

Other safety characteristics	No information available
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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 metal alkoxides may cause a fire. In contact with oxidants causes severe reactions, and may cause a fire or explosion. In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.
10.4 Conditions to avoid	Incompatible materials, heat, flame and spark.
10.5 Incompatible materials	Metal alkyl oxide, metal hydride, inorganic peroxide, nitrate and halogens oxyacid salts. Oxidants, alkali metals, alkaline earth metals and aluminum. Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.
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

6 Mix alcohols and esters in ethanol:water	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Causes serious eye damage(Category 1)
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

| Acute toxicity

Component	LD ₅₀ (oral)	LD ₅₀ (dermal)	LC ₅₀ (inhalation,4h)
Propan-1-ol	1870mg/kg(Rat)	5040mg/kg(Rabbit)	No information available
Ethyl butyrate	13000mg/kg(Rat)	> 2000mg/kg(Rabbit)	No information available
Ethanol	7060mg/kg(Rat)	No information available	39mg/L(Mouse)
2-phenylethanol	1790mg/kg(Rat)	No information available	No information available
Ethyl lactate	8200mg/kg(Rat)	> 5000mg/kg(Rabbit)	No information available
Ethyl acetate	5620mg/kg(Rat)	> 18000mg/kg(Rabbit)	No information available

| Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP
Ethyl acetate	Not Listed	Not Listed
Ethyl hexanoate	Not Listed	Not Listed
Ethyl lactate	Not Listed	Not Listed
Ethyl butyrate	Not Listed	Not Listed
Propan-1-ol	Not Listed	Not Listed
2-phenylethanol	Not Listed	Not Listed
Ethanol	Category 1(Remark 1)	Not Listed
Water	Not Listed	Not Listed

Remark 1: for alcoholic beverages only

| 11.2 Information on other hazards**| 11.2.1 Endocrine disrupting properties**

Component	Endocrine disrupting properties
Ethyl acetate	No information available
Ethyl hexanoate	No information available
Ethyl lactate	No information available
Ethyl butyrate	No information available
Propan-1-ol	No information available
2-phenylethanol	No information available
Ethanol	No information available
Water	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
Ethyl hexanoate	LC ₅₀ : 6.74mg/L (96h)(Fish)	No information available	ErC ₅₀ : 11.8mg/L (72h)(Algae)
Propan-1-ol	LC ₅₀ : 4555mg/L (96h)(Fish)	EC ₅₀ : 4130mg/L (48h)(Crustaceans)	ErC ₅₀ : 4480mg/L (96h)(Algae)
Ethyl butyrate	LC ₅₀ : ≥ 100mg/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
2-phenylethanol	No information available	EC ₅₀ : 287.17mg/L (48h)(Crustaceans)	ErC ₅₀ : 490mg/L (72h)(Algae)
Ethyl lactate	LC ₅₀ : 320mg/L (96h)(Fish)	EC ₅₀ : 622mg/L (48h)(Crustaceans)	ErC ₅₀ : 417.339mg/L (96h)(Algae)
Ethyl acetate	LC ₅₀ : 230mg/L (96h)(Fish)	No information available	ErC ₅₀ : 2500mg/L (96h)(Algae)

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Ethyl butyrate	NOEC : 1.483mg/L(Fish)	No information available	No information available

12.2 Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
2-phenylethanol	Low	Low
Ethanol	Low(Half-life = 2.17 days)	Low(Half-life = 5.08 days)

12.3 Bioaccumulative potential

Component	Bioaccumulative potential	Comments
2-phenylethanol	Low	Log Kow=1.4
Ethanol	Low	Log Kow=-0.31

12.4 Mobility in soil

Component	log Koc	Remark
Ethyl butyrate	1.346	25 °C , pH=6.68
2-phenylethanol	1.50	20 °C
Ethanol	0	

12.5 Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Ethyl acetate	Not PBT/vPvB

Ethyl hexanoate	Not PBT/vPvB
Ethyl lactate	Insufficient information, temporarily unable to evaluate
Ethyl butyrate	Not PBT/vPvB
Propan-1-ol	Insufficient information, temporarily unable to evaluate
2-phenylethanol	Not PBT/vPvB
Ethanol	Not PBT/vPvB
Water	Insufficient information, temporarily unable to evaluate

12.6 Endocrine disrupting properties

Component	Endocrine disrupting properties
Ethyl acetate	No information available
Ethyl hexanoate	No information available
Ethyl lactate	No information available
Ethyl butyrate	No information available
Propan-1-ol	No information available
2-phenylethanol	No information available
Ethanol	No information available
Water	No information available

12.7 Other adverse effects

	No information available
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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	
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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)	No
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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)	No

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)	No

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.
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Maritime 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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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
Ethyl acetate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethyl hexanoate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Ethyl lactate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethyl butyrate	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Propan-1-ol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2-phenylethanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ethanol	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Water	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

- [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
Ethyl acetate	×	×	×
Ethyl hexanoate	×	×	×
Ethyl lactate	×	×	×
Ethyl butyrate	×	×	×
Propan-1-ol	×	×	×
2-phenylethanol	×	×	×
Ethanol	×	×	×
Water	×	×	×

- [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
Ethyl acetate	×	×	×	✓	✓	×	×	×	×
Ethyl hexanoate	×	×	×	✓	✓	×	×	×	×
Ethyl lactate	×	×	×	✓	✓	×	×	×	×
Ethyl butyrate	×	×	×	✓	✓	×	×	×	×
Propan-1-ol	×	×	×	✓	✓	×	×	×	×
2-phenylethanol	×	×	×	✓	✓	×	×	×	×
Ethanol	×	×	×	✓	✓	×	×	×	×

Water	x	x	x	✓	x	x	x	x	x
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- [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.

“x” No data or not included in the regulations.

German water hazard class(WGK)

Component	WGK	Remark
Ethyl acetate	WGK 1	
Ethyl hexanoate	WGK 1	
Ethyl lactate	WGK 1	
Ethyl butyrate	WGK 1	
Propan-1-ol	WGK 1	
2-phenylethanol	WGK 1	
Ethanol	WGK 1	The assessment refers to pure ethanol. Denatured alcohol must be classified in accordance with Annex 1 No. 5 of the AwSV.

【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
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/m ³ 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 hexanoate	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/m ³ 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 lactate	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/m ³ 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 butyrate	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/m ³ 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.	
Propan-1-ol	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/m ³ 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.	
2-phenylethanol	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/m ³ 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.	
Ethanol	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/m ³ 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
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	
Ethyl hexanoate	TRGS 201 TRGS 400 TRGS 555 TRGS 600 TRGS 500 TRGS 509 TRGS 510 TRGS 800 TRGS 720 TRGS 721 TRGS 722 TRGS 723 TRGS 724	
Ethyl lactate	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 butyrate	TRGS 201 TRGS 400 TRGS 555 TRGS 600 TRGS 500 TRGS 509 TRGS 510 TRGS 800 TRGS 720 TRGS 721 TRGS 722 TRGS 723 TRGS 724	
Propan-1-ol	TRGS 201 TRGS 400 TRGS 555 TRGS 600 TRGS 500 TRGS 509 TRGS 510 TRGS 800 TRGS 720 TRGS 721 TRGS 722 TRGS 723 TRGS 724	
2-phenylethanol	TRGS 201 TRGS 400 TRGS 555 TRGS 600 TRGS 500 TRGS 509 TRGS 510 TRGS 800	
Ethanol	TRGS 201 TRGS 400 TRGS 555 TRGS 600 TRGS 402 TRGS 500 TRGS 509 TRGS 510 TRGS 800 TRGS 720 TRGS 721 TRGS 722 TRGS 723 TRGS 724	
Water	TRGS 500 TRGS 509 TRGS 510	

15.2 Chemical safety assessment

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