

SAFETY DATA SHEET

Version 8.6
Revision Date 29.03.2023
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name : Ethyl acetate for liquid chromatography
LiChrosolv®

Product Number : 1.00868
Catalogue No. : 100868
Brand : Millipore
CAS-No. : 141-78-6

1.2 Other means of identification

No data available

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

Identified uses : Reagent for analysis, Chemical production

1.4 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Pty. Ltd.
Suite 1, Level 1, Building B
11 Talavera Road
MACQUARIE PARK NSW 2113
AUSTRALIA

Telephone : +61 1800 800 097

1.5 Emergency telephone

Emergency Phone # : Free call (24/7): 1800 448 465
Int'l (24/7): +61 2 9037 2994
(CHEMTREC)

SECTION 2: Hazards identification

2.1 GHS Classification

Flammable liquids (Category 2), H225
Serious eye damage/eye irritation (Category 2A), H319
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word : Danger

Hazard statement(s)
H225 : Highly flammable liquid and vapor.
H319 : Causes serious eye irritation.
H336 : May cause drowsiness or dizziness.

Millipore- 1.00868

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Precautionary statement(s)

Prevention

| | |
|------|---|
| P210 | Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking. |
| P233 | Keep container tightly closed. |
| P261 | Avoid breathing mist or vapors. |
| P280 | Wear protective gloves/ eye protection/ face protection. |

Response

| | |
|--------------------|---|
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. |
| P304 + P340 + P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell. |
| P337 + P313 | If eye irritation persists: Get medical advice/ attention. |
| P370 + P378 | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. |

Storage

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

2.3 Other hazards

Repeated exposure may cause skin dryness or cracking.

SECTION 3: Composition/information on ingredients

Substance / Mixture : Substance

3.1 Substances

| | |
|------------------|--|
| Formula | : C ₄ H ₈ O ₂ |
| Molecular weight | : 88.11 g/mol |
| CAS-No. | : 141-78-6 |
| EC-No. | : 205-500-4 |
| Index-No. | : 607-022-00-5 |

Hazardous ingredients

| Component | Classification | Concentration |
|----------------------|--|---------------|
| ethyl acetate | Flam. Liq. 2; Eye Dam./Irrit. 2A; STOT SE 3; H225, H319, H336 Concentration limits: 20 %: STOT SE 3, H336; | <= 100 % |

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂) Foam Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition.

Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®).

Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Protected from light. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.3 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

| Component | CAS-No. | Value | Control parameters | Basis |
|---------------|----------|-------|------------------------------------|--|
| ethyl acetate | 141-78-6 | STEL | 400 ppm 1,440 mg/m ³ | Australia. Workplace Exposure Standards for Airborne Contaminants. |
| | | TWA | 200 ppm 720 mg/m ³ | Australia. Workplace Exposure Standards for Airborne Contaminants. |

8.2 Exposure controls

Appropriate engineering controls

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 120 min

Material tested: Butoject® (KCL 898)

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

required when vapours/aerosols are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|--|
| a) Physical state | liquid |
| b) Color | colorless |
| c) Odor | fruity |
| d) Melting point/freezing point | Melting point/freezing point: -83 °C |
| e) Initial boiling point and boiling range | 77.1 °C at 1,013 hPa |
| f) Flammability (solid, gas) | No data available |
| g) Upper/lower flammability or explosive limits | Upper explosion limit: 11.5 %(V) Lower explosion limit: 2.1 %(V) |
| h) Flash point | -4 °C - closed cup |
| i) Autoignition temperature | No data available |
| j) Decomposition temperature | Distillable in an undecomposed state at normal pressure. |
| k) pH | No data available |
| l) Viscosity | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |
| m) Water solubility | No data available |
| n) Partition coefficient: | log Pow: 0.73 - Bioaccumulation is not expected., (Lit.) |

| | | |
|----|--------------------------|---------------------------------|
| | n-octanol/water | |
| o) | Vapor pressure | No data available |
| p) | Density | 0.90 g/cm ³ at 20 °C |
| | Relative density | No data available |
| q) | Relative vapor density | No data available |
| r) | Particle characteristics | No data available |
| s) | Explosive properties | No data available |
| t) | Oxidizing properties | none |

9.2 Other safety information

| | |
|------------------------|------|
| Relative vapor density | 3.04 |
|------------------------|------|

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

Exothermic reaction with:

Fluorine

chlorosulfonic acid

Strong oxidizing agents

fuming sulfuric acid

Risk of explosion with:

lithium aluminium hydride

Alkali metals

hydrides

Alkaline earth metals

Violent reactions possible with:

Strong acids and strong bases

10.4 Conditions to avoid

Warming.

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 5,620 mg/kg

Remarks: (RTECS)

Inhalation: No data available

LD50 Dermal - Rabbit - male - > 20,000 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation

Remarks: (IUCLID)

Serious eye damage/eye irritation

Remarks: Causes serious eye irritation.

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

Germ cell mutagenicity

Test Type: UDS (Unscheduled DNA synthesis assay)

Test system: Escherichia coli

Metabolic activation: with and without metabolic activation

Method: US-EPA

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: Micronucleus test

Species: Chinese hamster

Cell type: Red blood cells (erythrocytes)

Application Route: Oral

Method: OECD Test Guideline 474

Result: negative

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness. - Central nervous system

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Repeated dose toxicity - Rat - male and female - Oral - 92 Days - NOAEL (No observed adverse effect level) - 900 mg/kg - LOAEL (Lowest observed adverse effect level) - 3,600 mg/kg

Inhalation of high concentrations may cause:, Headache, Drowsiness, Dizziness, Vomiting, narcosis, anemia, Central nervous system depression

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Kidney - Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

| | |
|---|--|
| Toxicity to fish | flow-through test LC50 - Pimephales promelas (fathead minnow) - 230 mg/l - 96 h (US-EPA) |
| Toxicity to algae | static test NOEC - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201) |
| Toxicity to bacteria | Remarks: (IUCLID) (ethyl acetate) |
| Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) | semi-static test NOEC - Daphnia magna (Water flea) - 2.4 mg/l - 21 d (OECD Test Guideline 211) |

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 20 d
Result: ca.69 % - Readily biodegradable.
Remarks: (ECHA)

Theoretical oxygen demand 1,820 mg/g
Remarks: (Lit.)

12.3 Bioaccumulative potential

Bioaccumulation Leuciscus idus melanotus - 3 Days at 22.5 °C(ethyl acetate)

Bioconcentration factor (BCF): 30

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties

No data available

12.7 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information

14.1 UN number

ADR/RID: 1173

IMDG: 1173

IATA-DGR: 1173

14.2 UN proper shipping name

ADR/RID: ETHYL ACETATE

IMDG: ETHYL ACETATE

IATA-DGR: Ethyl acetate

14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA-DGR: 3

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA-DGR: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA-DGR: no

14.6 Special precautions for user

None

14.7 Incompatible materials

Other regulations

Hazchem Code : •3YE

SECTION 15: Regulatory information

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

Standard for the Uniform Scheduling of Medicines and Poisons

: No poison schedule number allocated

SECTION 16: Other information

-Full text of H-Statements referred to under sections 2 and 3.

H225

Highly flammable liquid and vapor.

H319

Causes serious eye irritation.

H336

May cause drowsiness or dizziness.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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