

SAFETY DATA SHEET

according to EC directive 2001/58/EC
Version 3.0 Revision Date 23.03.2007
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1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product name : **Ethyl acetate**

Product Number : 45780
Brand : Fluka

Company : Sigma-Aldrich Company Ltd.
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₄H₈O₂
Molecular Weight : 88.11 g/mol

| CAS-No. | EC-No. | Index-No. | Classification | Concentration [%] |
|----------------------|-----------|--------------|---------------------------|-------------------|
| Ethyl acetate | | | | |
| 141-78-6 | 205-500-4 | 607-022-00-5 | F, Xi, R11- R36- R66- R67 | - |

3. HAZARDS IDENTIFICATION

Risk advice to man and the environment

Highly flammable. Irritating to eyes. Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide (CO₂) For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|---------------|----------|-------|--------------------|------------|---|
| Ethyl acetate | 141-78-6 | STEL | 400 ppm | 2001-04-01 | UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits |
| | | TWA | 200 ppm | 2001-04-01 | UK. Health and Safety Commission, EH 40/2005, Workplace exposure limits |

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

Eye protection

Safety glasses

Skin and body protection

impervious clothing, Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

| | |
|--------|---------------|
| Form | clear, liquid |
| Colour | colourless |

Safety data

| | |
|--|------------------------|
| pH | no data available |
| Melting point | -84.0 °C |
| Boiling point | 76.5 - 77.5 °C |
| Flash point | -3.0 °C - closed cup |
| Ignition temperature | 427 °C |
| Lower explosion limit | 2.2 %(V) |
| Upper explosion limit | 11.5 %(V) |
| Vapour pressure | 97.3 hPa at 20.0 °C |
| Density | 0.90 g/cm ³ |
| Water solubility | soluble |
| Partition coefficient (n-octanol/water) | log Pow: 0.73 |

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products**Hazardous decomposition products formed under fire conditions.**

Carbon oxides

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 5,620 mg/kg

LC50 Inhalation - mouse - 2 h - 45,000 mg/m³

LD50 Dermal - rabbit - > 180,000 mg/kg

Irritation and corrosion

Skin: no data available

Sensitization

Remarks: no data available

Chronic exposure

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

Signs and Symptoms of Exposure

Central nervous system depression, Drowsiness, narcosis, anemia

Potential Health Effects

| | |
|----------------------|---|
| Inhalation | May be harmful if inhaled. May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness. |
| Skin | May be harmful if absorbed through skin. May cause skin irritation. Repeated exposure may cause skin dryness or cracking. |
| Eyes | Causes eye irritation. |
| Ingestion | May be harmful if swallowed. |
| Target Organs | Blood, Kidney, Liver, Central nervous system, |

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability Remarks: no data available

Ecotoxicity effects

| | |
|--|---|
| Toxicity to fish | LC50 - Oncorhynchus mykiss (rainbow trout) - 350.00 - 600.00 mg/l - 96 h |
| | LC50 - Pimephales promelas (fathead minnow) - 220.00 - 250.00 mg/l - 96 h |
| Toxicity to daphnia and other aquatic invertebrates. | EC50 - Daphnia magna (Water flea) - 2,300.00 - 3,090.00 mg/l - 24 h |
| | LC50 - Daphnia magna (Water flea) - 560 mg/l - 48 h |
| Toxicity to algae | EC50 - No information available. - 4,300.00 mg/l - 24 h |
| | EC50 - SELENASTRUM - 1,800.00 - 3,200.00 mg/l - 72 h |

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS

Product

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**ADR/RID**UN-No.: 1173 Class: 3 Packing group: II
Proper shipping name: ETHYL ACETATE**IMDG**UN-No.: 1173 Class: 3 Packing group: II EMS-No: F-E, S-D
Proper shipping name: ETHYL ACETATE
Marine pollutant: No**IATA**UN-No.: 1173 Class: 3 Packing group: II
Proper shipping name: Ethyl acetate**15. REGULATORY INFORMATION****Labelling according to EC Directives**

EC Label

Hazard symbols

F Highly flammable
Xi Irritant

R-phrases(s)

R11 Highly flammable.
R36 Irritating to eyes.
R66 Repeated exposure may cause skin dryness or cracking.
R67 Vapours may cause drowsiness and dizziness.

S-phrases(s)

S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S33 Take precautionary measures against static discharges.**16. OTHER INFORMATION****Further information**

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