

## SAFETY DATA SHEET

Version 8.8  
Revision Date 03/02/2024  
Print Date 05/12/2024**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifiers**

Product name : Ethyl acrylate (stabilised with hydroquinone monomethyl ether) for synthesis

Product Number : 8.00836  
Catalogue No. : 800836  
Brand : Millipore  
Index-No. : 607-032-00-X  
CAS-No. : 140-88-5**1.2 Relevant identified uses of the substance or mixture and uses advised against**Identified uses : Chemical for synthesis  
Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.**1.3 Details of the supplier of the safety data sheet**Company : Sigma-Aldrich Inc.  
3050 SPRUCE ST  
ST. LOUIS MO 63103  
UNITED STATESTelephone : +1 314 771-5765  
Fax : +1 800 325-5052**1.4 Emergency telephone**

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**Flammable liquids (Category 2), H225  
Acute toxicity, Oral (Category 4), H302

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Acute toxicity, Inhalation (Category 3), H331  
 Acute toxicity, Dermal (Category 4), H312  
 Skin irritation (Category 2), H315  
 Eye irritation (Category 2A), H319  
 Skin sensitization (Category 1), H317  
 Carcinogenicity (Category 2), H351  
 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335  
 Short-term (acute) aquatic hazard (Category 2), H401  
 Long-term (chronic) aquatic hazard (Category 3), H412

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 Statements

H225 Highly flammable liquid and vapor.  
 H302 + H312 Harmful if swallowed or in contact with skin.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H331 Toxic if inhaled.  
 H335 May cause respiratory irritation.  
 H351 Suspected of causing cancer.  
 H401 Toxic to aquatic life.  
 H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P210 Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.  
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P273 Avoid release to the environment.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
 P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated

|                    |  |
|--------------------|--|
| P304 + P340 + P311 | clothing. Rinse skin with water/ shower.<br>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor. |
| P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.                     |
| P308 + P313        | IF exposed or concerned: Get medical advice/ attention.  |
| P333 + P313        | If skin irritation or rash occurs: Get medical advice/ attention.  |
| P337 + P313        | If eye irritation persists: Get medical advice/ attention.   |
| P362               | Take off contaminated clothing and wash before reuse.  |
| P370 + P378        | In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.   |
| P403 + P233        | Store in a well-ventilated place. Keep container tightly closed.   |
| P403 + P235        | Store in a well-ventilated place. Keep cool.   |
| P405               | Store locked up.   |
| P501               | Dispose of contents/ container to an approved waste disposal plant.  |

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                  |                |
|------------------|----------------|
| Formula          | : C5H8O2       |
| Molecular weight | : 100.12 g/mol |
| CAS-No.          | : 140-88-5     |
| EC-No.           | : 205-438-8    |
| Index-No.        | : 607-032-00-X |

| Component             | Classification   | Concentration |
|-----------------------|--|---------------|
| <b>Ethyl acrylate</b> | Flam. Liq. 2; Acute Tox. 4; Acute Tox. 3; Acute Tox. 4; Skin Irrit. 2; Eye Irrit. 2A; Skin Sens. 1; Carc. 2; STOT SE 3; Aquatic Acute 2; Aquatic Chronic 3; H225, H302, H331, H312, H315, H319, H317, H351, H335, H401, H412<br>Concentration limits:<br>>= 5 %: Skin Irrit. 2, H315; >= 5 %: Eye Irrit. 2, H319; >= 5 %: STOT SE 3, H335; | <= 100 %      |

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

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### In case of skin contact

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

#### 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

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>) 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

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### 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.

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## 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 carefully 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.

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## 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

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Protected from light. Keep away from heat and sources of ignition. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

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 1.2 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 acrylate | 140-88-5 | TWA                                    | 5 ppm                           | USA. ACGIH Threshold Limit Values (TLV)   |
|                | Remarks  | Not classifiable as a human carcinogen |                                 |   |
|                |          | STEL                                   | 15 ppm                          | USA. ACGIH Threshold Limit Values (TLV)   |
|                |          | Not classifiable as a human carcinogen |                                 |   |
|                |          | Potential Occupational Carcinogen      |                                 |   |
|                |          | TWA                                    | 25 ppm<br>100 mg/m <sup>3</sup> | USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants        |
|                |          | Skin designation                       |                                 |   |
|                |          | PEL                                    | 5 ppm<br>20 mg/m <sup>3</sup>   | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|                |          | Skin                                   |                                 |   |
|                |          | STEL                                   | 25 ppm<br>100 mg/m <sup>3</sup> | California permissible exposure limits for chemical contaminants (Title 8, Article 107) |
|                |          | Skin                                   |                                 |   |

### 8.2 Exposure controls

#### Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face 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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.4 mm

Break through time: 30 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

### **Body Protection**

Flame retardant antistatic protective clothing.

### **Respiratory protection**

Recommended Filter type: Filter A-(P2)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

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.

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## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

- |   |   |
|---|---|
| a) Appearance                                   | Form: liquid<br>Color: colorless                                    |
| b) Odor   | stingingpungent   |
| c) Odor Threshold                               | No data available   |
| d) pH   | No data available   |
| e) Melting point/freezing point                 | Melting point/range: -71 °C (-96 °F)                                |
| f) Initial boiling point and boiling range      | 98 - 100 °C 208 - 212 °F at 1,013.25 hPa                            |
| g) Flash point                                  | 9 °C (48 °F) - closed cup   |
| h) Evaporation rate                             | No data available   |
| i) Flammability (solid, gas)                    | No data available   |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 12.1 %(V)<br>Lower explosion limit: 1.8 %(V) |
| k) Vapor pressure                               | 41.3 hPa at 20 °C (68 °F)   |

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- l) Vapor density 3.46 - (Air = 1.0)
- m) Density 0.924 g/cm<sup>3</sup> at 20 °C (68 °F)  
Relative density No data available
- n) Water solubility 20 g/l at 20 °C (68 °F)
- o) Partition coefficient: log Pow: 1.18 at 25 °C (77 °F) - Bioaccumulation is not expected.  
n-octanol/water
- p) Autoignition temperature 372 °C (702 °F) at 1,013.25 hPa
- q) Decomposition temperature No data available
- r) Viscosity 0.582 mm<sup>2</sup>/s at 25 °C (77 °F) -
- s) Explosive properties No data available
- t) Oxidizing properties none

## 9.2 Other safety information

- Relative vapor density 3.46 - (Air = 1.0)

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapors may form explosive mixture with air.

### 10.2 Chemical stability

Hazardous polymerization may occur.

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

Contains the following stabilizer(s):

hydroquinone monomethyl ether (0.0015 %)

### 10.3 Possibility of hazardous reactions

Polymerization can occur.

### 10.4 Conditions to avoid

Heat. Oxygen free atmosphere.

May polymerize on exposure to light.

Warming.

### 10.5 Incompatible materials

Oxidizing agents, Peroxides

### 10.6 Hazardous decomposition products

In the event of fire: see section 5



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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

Acute toxicity estimate Oral - 1,121 mg/kg  
(Calculation method)

LD50 Oral - Rat - male - 1,120 mg/kg

Remarks: (ECHA)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of aspiration upon vomiting., Pulmonary failure possible after aspiration of vomit.

Acute toxicity estimate Inhalation - 4 h - 9.14 mg/l - vapor(Calculation method)

LC50 Inhalation - Rat - male and female - 4 h - 9.137 mg/l - vapor

(OECD Test Guideline 403)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract, Inhalation may lead to the formation of oedemas in the respiratory tract.

Inhalation: Irritating to respiratory system.

Acute toxicity estimate Dermal - 1,801 mg/kg

(Calculation method)

LD50 Dermal - Rabbit - 1,800 mg/kg

Remarks: (IUCLID)

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Irritating to skin.

(OECD Test Guideline 404)

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

Remarks: Dermatitis

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation

Remarks: (IUCLID)

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

#### Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: positive

(OECD Test Guideline 429)

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

#### Germ cell mutagenicity

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow  
Application Route: Intraperitoneal  
Method: OECD Test Guideline 474  
Result: negative

### **Carcinogenicity**

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Ethyl acrylate)  
NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

### **Reproductive toxicity**

No data available

### **Specific target organ toxicity - single exposure**

Inhalation - May cause respiratory irritation. - Respiratory Tract  
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 - 13 Weeks - NOAEL (No observed adverse effect level) - 55 mg/kg - LOAEL (Lowest observed adverse effect level) - 110 mg/kg

Nausea, Headache, Drowsiness

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

After absorption:

Shortness of breath  
Drowsiness  
somnolence  
ataxia (impaired locomotor coordination)  
Gastrointestinal disturbance  
Nausea  
Vomiting  
Cough  
Convulsions

Handle in accordance with good industrial hygiene and safety practice.

Stomach - Irregularities - Based on Human Evidence

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## SECTION 12: Ecological information

### 12.1 Toxicity

|   |   |
|---|---|
| Toxicity to fish  | semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - 1.81 mg/l - 96 h<br>(OECD Test Guideline 203) |
| Toxicity to daphnia and other aquatic invertebrates                   | static test EC50 - Daphnia magna (Water flea) - 1.3 mg/l - 48 h<br>(OECD Test Guideline 202)                |
| Toxicity to algae   | static test ErC50 - Desmodesmus subspicatus (green algae) - 5.28 mg/l - 72 h<br>(OECD Test Guideline 201)   |
| Toxicity to bacteria  | static test EC10 - activated sludge - > 100 mg/l - 72 h<br>Remarks: (ECHA)                                  |
| Toxicity to daphnia and other aquatic invertebrates(Chronic toxicity) | semi-static test NOEC - Daphnia magna (Water flea) - 0.136 mg/l - 21 d<br>(OECD Test Guideline 211)         |

### 12.2 Persistence and degradability

|                                 |   |
|---------------------------------|---|
| Biodegradability                | aerobic - Exposure time 28 d<br>Result: 80 - 90 % - Readily biodegradable.<br>(OECD Test Guideline 310) |
| Biochemical Oxygen Demand (BOD) | 980 mg/g<br>Remarks: (IUCLID)   |

### 12.3 Bioaccumulative potential

No data available

### 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

Additional ecological information Discharge into the environment must be avoided.

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**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](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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**SECTION 14: Transport information****DOT (US)**

UN number: 1917 Class: 3 Packing group: II  
Proper shipping name: Ethyl acrylate, stabilized  
Reportable Quantity (RQ): 1000 lbs  
Poison Inhalation Hazard: No

**IMDG**

UN number: 1917 Class: 3 Packing group: II EMS-No: F-E, S-D  
Proper shipping name: ETHYL ACRYLATE, STABILIZED

**IATA**

UN number: 1917 Class: 3 Packing group: II  
Proper shipping name: Ethyl acrylate, stabilized

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**SECTION 15: Regulatory information****SARA 302 Components**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

|                | CAS-No.  | Revision Date |
|----------------|----------|---------------|
| Ethyl acrylate | 140-88-5 | 2007-03-01    |

**Massachusetts Right To Know Components**

|                | CAS-No.  | Revision Date |
|----------------|----------|---------------|
| Ethyl acrylate | 140-88-5 | 2007-03-01    |

**Pennsylvania Right To Know Components**

|                | CAS-No.  | Revision Date |
|----------------|----------|---------------|
| Ethyl acrylate | 140-88-5 | 2007-03-01    |

**California Prop. 65 Components**

|   | CAS-No.  | Revision Date |
|---|----------|---------------|
| , which is/are known to the State of California to cause cancer. For more information go to | 140-88-5 | 2007-09-28    |

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**SECTION 16: Other information****Further information**

The information is believed to be correct but is not exhaustive and will be used solely as a guideline, which is based on current knowledge of the chemical substance or mixture and is applicable to appropriate safety precautions for the product. 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](http://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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