

## SAFETY DATA SHEET

Version 5.7  
Revision Date 05/24/2016  
Print Date 10/19/2018

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1. PRODUCT AND COMPANY IDENTIFICATION

## 1.1 Product identifiers

Product name : *N*-Hydroxyethyl acrylamide

Product Number : 697931

Brand : Aldrich

CAS-No. : 7646-67-5

## 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

## 1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA

Telephone : +1 800-325-5832

Fax : +1 800-325-5052

## 1.4 Emergency telephone number

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

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2. HAZARDS IDENTIFICATION

## 2.1 Classification of the substance or mixture

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Serious eye damage (Category 1), H318

Specific target organ toxicity - repeated exposure, Oral (Category 2), H373

Acute aquatic toxicity (Category 3), H402

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)

H318

Causes serious eye damage.

H373

May cause damage to organs through prolonged or repeated exposure if swallowed.

H402

Harmful to aquatic life.

Precautionary statement(s)

P260

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P273

Avoid release to the environment.

P280

Wear protective gloves/ eye protection/ face protection.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310

Immediately call a POISON CENTER/doctor.

P501

Dispose of contents/ container to an approved waste disposal plant.

Sensitising components:

Mequinol

May produce an allergic reaction.

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

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Synonyms : *N*-(2-Hydroxyethyl)acrylamide  
HEAA

Formula : C<sub>5</sub>H<sub>9</sub>NO<sub>2</sub>

Molecular weight : 115.13 g/mol

CAS-No. : 7646-67-5

#### Hazardous components

Component	Classification	Concentration
<b>N-Hydroxyethyl acrylamide</b>		
	Eye Dam. 1; STOT RE 2; Aquatic Acute 3; H318, H373, H402	<= 100 %
<b>Mequinol</b>		
	Acute Tox. 4; Eye Irrit. 2A; Skin Sens. 1; Repr. 2; Aquatic Acute 2; Aquatic Chronic 3; H302, H317, H319, H361, H401, H412	>= 0.1 - < 1 %

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

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### 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

Never give anything by mouth to an unconscious person. Rinse mouth with water. 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

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

#### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## 5.2 Special hazards arising from the substance or mixture

No data available

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

No data available

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## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

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

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.

Recommended storage temperature 2 - 8 °C

Light sensitive.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Mequinol	150-76-5	TWA	5.000000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Eye irritation Skin damage		
		TWA	5 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Eye irritation Skin damage		
		TWA	5.000000 mg/m3	USA. NIOSH Recommended Exposure Limits
		PEL	5 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

Hazardous components without workplace control parameters

## 8.2 Exposure controls

### Appropriate engineering controls

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

### Personal protective equipment

#### Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### 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).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |   |
|---|---|
| a) Appearance                                   | Form: liquid<br>Colour: colourless  |
| b) Odour  | No data available   |
| c) Odour Threshold                              | No data available   |
| d) pH   | 2.6 at 10 g/l at 25 °C (77 °F)  |
| e) Melting point/freezing point                 | Melting point/range: -13.7 °C (7.3 °F)  |
| f) Initial boiling point and boiling range      | 129 - 130 °C (264 - 266 °F)   |
| g) Flash point                                  | 148 °C (298 °F) - closed cup - Tested according to Annex V of Directive 67/548/EEC. |
| h) Evaporation rate                             | No data available   |
| i) Flammability (solid, gas)                    | No data available   |
| j) Upper/lower flammability or explosive limits | No data available   |
| k) Vapour pressure                              | No data available   |
| l) Vapour density                               | No data available   |
| m) Relative density                             | 1.111 g/cm <sup>3</sup> at 25 °C (77 °F)  |
| n) Water solubility                             | 1,000 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - completely soluble           |
| o) Partition coefficient: n-octanol/water       | log Pow: -0.73 at 20 °C (68 °F)   |
| p) Auto-ignition                                | No data available   |

temperature

- |                              |                   |
|------------------------------|-------------------|
| q) Decomposition temperature | No data available |
| r) Viscosity                 | No data available |
| s) Explosive properties      | Not explosive     |
| t) Oxidizing properties      | No data available |

## 9.2 Other safety information

Surface tension	72 mN/m at 20 °C (68 °F)
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## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.  
Contains the following stabiliser(s):  
Mequinol (<=0.11 %)

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents Strong oxidizing agents, chloroanilines, Isocyanates

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)  
Other decomposition products - No data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 423)

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2,000 mg/kg  
(OECD Test Guideline 402)

No data available

#### Skin corrosion/irritation

Skin - Rabbit  
Result: No skin irritation - 4 d  
(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit  
Result: Risk of serious damage to eyes.  
(OECD Test Guideline 405)

#### Respiratory or skin sensitisation

in vivo assay  
Result: Did not cause sensitisation on laboratory animals.  
(OECD Test Guideline 429)

#### Germ cell mutagenicity

No data available

### **Carcinogenicity**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No component 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 identified as a carcinogen or potential carcinogen by OSHA.

### **Reproductive toxicity**

No data available

No data available

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

No data available

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

Oral - The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

### **Aspiration hazard**

No data available

### **Additional Information**

RTECS: Not available

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

Stomach - Irregularities - Based on Human Evidence (Mequinol)

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## **12. ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

- |   |   |
|---|---|
| Toxicity to fish                                    | semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 98 mg/l - 96 h (OECD Test Guideline 203)        |
| Toxicity to daphnia and other aquatic invertebrates | static test EC50 - Daphnia magna (Water flea) - > 96.4 mg/l - 48 h (OECD Test Guideline 202)                    |
| Toxicity to algae                                   | static test EC50 - Pseudokirchneriella subcapitata (green algae) - > 96.6 mg/l - 72 h (OECD Test Guideline 201) |

### **12.2 Persistence and degradability**

- |                  |   |
|------------------|---|
| Biodegradability | aerobic - Exposure time 28 d<br>Result: 98.4 % - Readily biodegradable (OECD Test Guideline 301A) |
|------------------|---|

### **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 Other adverse effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life.

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## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

#### Contaminated packaging

Dispose of as unused product.

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## 14. TRANSPORT INFORMATION

#### DOT (US)

Not dangerous goods

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

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## 15. REGULATORY INFORMATION

#### SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Acute Health Hazard

#### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know Components

	CAS-No.	Revision Date
N-Hydroxyethyl acrylamide	7646-67-5	

#### New Jersey Right To Know Components

	CAS-No.	Revision Date
N-Hydroxyethyl acrylamide	7646-67-5	

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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## 16. OTHER INFORMATION

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

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Serious eye damage
Eye Irrit.	Eye irritation
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361	Suspected of damaging fertility or the unborn child.

H373	May cause damage to organs through prolonged or repeated exposure if swallowed.
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
Repr.	Reproductive toxicity
Skin Sens.	Skin sensitisation
STOT RE	Specific target organ toxicity - repeated exposure

**HMIS Rating**

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	1
Physical Hazard	0

**NFPA Rating**

Health hazard:	2
Fire Hazard:	1
Reactivity Hazard:	0

**Further information**

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**Preparation Information**

Sigma-Aldrich Corporation  
Product Safety – Americas Region  
1-800-521-8956

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