

# SAFETY DATA SHEET

Version 6.11  
Revision Date 08/07/2024  
Print Date 08/08/2024

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifiers

Product name : 1-Hexanol  
Product Number : 73117  
Brand : Sigma-Aldrich  
Index-No. : 603-059-00-6  
CAS-No. : 111-27-3

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

Identified uses : Laboratory chemicals, Synthesis of substances  
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 STATES  
Telephone : +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 3), H226  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Dermal (Category 4), H312  
Eye irritation (Category 2A), H319

Sigma-Aldrich - 73117

Page 1 of 11

Short-term (acute) aquatic hazard (Category 2), H401

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

Warning

Hazard Statements

H226

Flammable liquid and vapor.

H302 + H312

Harmful if swallowed or in contact with skin.

H319

Causes serious eye irritation.

H401

Toxic to aquatic life.

Precautionary Statements

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.

P264

Wash skin thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P273

Avoid release to the environment.

P280

Wear protective gloves/ 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 clothing. Rinse skin with water/ 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.

P337 + P313

If eye irritation persists: Get medical advice/ attention.

P363

Wash contaminated clothing before reuse.

P370 + P378

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

P403 + P235

Store in a well-ventilated place. Keep cool.

P501

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

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

---

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Synonyms : Hexyl alcohol

Formula : C<sub>6</sub>H<sub>14</sub>O

Molecular weight : 102.17 g/mol

Sigma-Aldrich - 73117

Page 2 of 11

CAS-No. : 111-27-3  
EC-No. : 203-852-3  
Index-No. : 603-059-00-6

Component	Classification	Concentration
<b>hexan-1-ol</b>		
	Flam. Liq. 3; Acute Tox. 4; Eye Irrit. 2A; Aquatic Acute 2; H226, H302, H312, H319, H401	<= 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**

No data available

##### **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 (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.

##### **5.3 Advice for firefighters**

No data available

##### **5.4 Further information**

No data available

---

#### **SECTION 6: Accidental release measures**

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

For personal protection see section 8.

## 6.2 Environmental precautions

No data available

## 6.3 Methods and materials for containment and cleaning up

No data available

## 6.4 Reference to other sections

For disposal see section 13.

---

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

For precautions see section 2.2.

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

No data available

### 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
hexan-1-ol	111-27-3	TWA	40 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
	Remarks	Eye irritation		

### 8.2 Exposure controls

#### Personal protective equipment

##### 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)

### Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic compounds

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

Prevent product from entering drains.

---

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- |                                                 |                                                                    |
|-------------------------------------------------|--------------------------------------------------------------------|
| a) Appearance                                   | Form: clear, liquid<br>Color: colorless                            |
| b) Odor                                         | characteristic                                                     |
| c) Odor Threshold                               | 10 ppm                                                             |
| d) pH                                           | No data available                                                  |
| e) Melting point/freezing point                 | Melting point/ range: -52 °C (-62 °F) - lit.                       |
| f) Initial boiling point and boiling range      | 156 - 157 °C 313 - 315 °F - lit.                                   |
| g) Flash point                                  | 60 °C (140 °F) - closed cup - ASTM D 93                            |
| h) Evaporation rate                             | No data available                                                  |
| i) Flammability (solid, gas)                    | No data available                                                  |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 7.7 %(V)<br>Lower explosion limit: 1.3 %(V) |
| k) Vapor pressure                               | 3.64 hPa at ca.38 °C (ca.100 °F) - ASTM D 2879-86                  |
| l) Vapor density                                | 3.53 - (Air = 1.0)                                                 |
| m) Density                                      | 0.814 g/mL at 25 °C (77 °F) - lit.                                 |
| Relative density                                | No data available                                                  |
| n) Water solubility                             | 1.3 g/l at 23 °C (73 °F) - OECD Test Guideline 105 - soluble       |

- o) Partition coefficient: n-octanol/water log Pow: 1.8 - OECD Test Guideline 117 - Bioaccumulation is not expected.
- p) Autoignition temperature ca.313 °C (ca.595 °F) at 1,013 hPa - ASTM E-659
- q) Decomposition temperature No data available
- r) Viscosity 3.64 mm<sup>2</sup>/s at 40 °C (104 °F) - ASTM D 445 -
- s) Explosive properties No data available
- t) Oxidizing properties none

## 9.2 Other safety information

Surface tension	30.21 mN/m - Surface tension
Relative vapor density	3.53 - (Air = 1.0)

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

No data available

### 10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents

halogens

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

Alkali metals

Alkaline earth metals

Aluminum

### 10.4 Conditions to avoid

No data available

### 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 - 720 mg/kg

Remarks: Liver:Fatty liver degeneration.

Kidney, Ureter, Bladder:Other changes.

Blood:Other changes.

LC50 Inhalation - Rat - male and female - 4 h - > 2.05 mg/l - vapor

Remarks: (ECHA)

(Regulation (EC) No 1272/2008, Annex VI)

LD50 Dermal - Rabbit - male and female - > 1,500 - < 2,000 mg/kg

(OECD Test Guideline 402)

No data available

#### Skin corrosion/irritation

Skin - Rabbit

Result: Mild skin irritation - 4 h

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: Eye irritation - 4 h

(OECD Test Guideline 405)

#### Respiratory or skin sensitization

Maximization Test - Guinea pig

Result: negative

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Test Type: Ames test

Test system: *S. typhimurium*

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro

Test system: Chinese hamster fibroblasts

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: Micronucleus test

Species: Mouse

Application Route: Oral

Method: OECD Test Guideline 474

Sigma-Aldrich - 73117

Page 7 of 11

Result: negative

### **Carcinogenicity**

IARC: No ingredient 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 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**

No data available

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

No data available

### **Aspiration hazard**

No data available

## **11.2 Additional Information**

RTECS: MQ4025000

Dermatitis, Nausea, Dizziness, Headache, narcosis

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

Systemic effects:

After absorption of large quantities:

Nausea

Vomiting

Diarrhea

Headache

narcosis

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence

---

## **SECTION 12: Ecological information**

### **12.1 Toxicity**

Toxicity to fish                      flow-through test LC50 - Pimephales promelas (fathead minnow) -  
Sigma-Aldrich - 73117

Page 8 of 11



97.2 - 97.5 mg/l - 96 h  
(US-EPA)

Toxicity to daphnia and other aquatic invertebrates static test EC50 - Daphnia magna (Water flea) - 7 mg/l - 48 h (OECD Test Guideline 202)  
Remarks: (ECHA)

Toxicity to algae static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 79.7 mg/l - 72 h (OECD Test Guideline 201)

## 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d  
Result: 87.5 % - Readily biodegradable.  
(OECD Test Guideline 301B)

Ratio BOD/ThBOD 28 %  
Remarks: (Lit.)

## 12.3 Bioaccumulative potential

Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 24 h  
- 39800 µg/l(hexan-1-ol)

Bioconcentration factor (BCF): 0.5

## 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

No data available

---

## SECTION 14: Transport information

### DOT (US)

UN number: 2282 Class: 3

Packing group: III

Proper shipping name: Hexanols

Sigma-Aldrich - 73117

Page 9 of 11

Reportable Quantity (RQ):  
Poison Inhalation Hazard: No

**IMDG**

UN number: 2282 Class: 3 Packing group: III EMS-No: F-E, S-D  
Proper shipping name: HEXANOLS

**IATA**

UN number: 2282 Class: 3 Packing group: III  
Proper shipping name: Hexanols

---

**SECTION 15: Regulatory information**

**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

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

**SARA 311/312 Hazards** : Fire Hazard  
Acute Health Hazard  
Chronic Health Hazard

**SARA 313** : 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.

**US State Regulations**

**Massachusetts Right To Know**

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

**Pennsylvania Right To Know**

hexan-1-ol 111-27-3

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**The ingredients of this product are reported in the following inventories:**

TSCA : All substances listed as active on the TSCA inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

---

**SECTION 16: Other information**

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

Version: 6.11

Revision Date: 08/07/2024

Print Date: 08/08/2024