

According to the UN GHS revision 8

Creation Date: May 29, 2026

Revision Date: May 29, 2026

## 1. IDENTIFICATION

### 1.1 GHS Product identifier

Product name: Lidocaine

Catalog Number: T0468

CAS Number: 137-58-6

### 1.2 Other means of identification

Other names: -

### 1.3 Recommended use of the chemical and restrictions on use

Identified uses: no data available

### 1.4 Supplier's details

Company: Targetmol Chemicals Inc.

Address: 34 Washington Street, Wellesley Hills, Massachusetts 02481 USA

Tel/Fax: (781) 999-4286

### 1.5 Emergency phone number

Emergency phone number: 781-999-4286

Service hours: Monday to Friday, 9am-5pm (Standard timezone: UTC/GMT -5 hours).

## 2. HAZARD IDENTIFICATION

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 4, Oral

### 2.2 GHS label elements, including precautionary statements

Pictogram(s):



Signal word: Warning

Hazard statement(s): H302 Harmful if swallowed

Precautionary statement(s):

**Prevention:** P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.

**Response:** P301+P317 IF SWALLOWED: Get medical help.  
P330 Rinse mouth.

**Storage:** none

**Disposal:** P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

### 2.3 Other hazards which do not result in classification

no data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number
Lidocaine	-	137-58-6	205-302-8

### 4. FIRST-AID MEASURES

#### 4.1 Description of necessary first-aid measures

##### General advice

no data available

##### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

##### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

##### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

##### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

#### 4.2 Most important symptoms/effects, acute and delayed

Demonstrate a case report involving successful use of lipid emulsion therapy for intractable cardiac arrest due to lidocaine toxicity. ... The mechanism of action of lipid emulsion therapy is not well defined and has been postulated to work by both a "lipid sink," decreasing circulating amounts of drugs to the periphery, or through a direct "energy source" to the myocardium. We present a case report of a patient successfully resuscitated with lipid emulsion therapy after prolonged and intractable lidocaine toxicity. Lidocaine is generally considered much less cardiotoxic than other local anesthetics and is used commonly as infusions for intractable ventricular arrhythmias. This case demonstrates the need to consider lipid emulsion therapy in the advanced cardiac life support algorithm for lidocaine toxicity as well as other lipid soluble drug intoxications.

#### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

no data available

### 5. FIRE-FIGHTING MEASURES

#### 5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.2 Specific hazards arising from the chemical

no data available

#### 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 6. ACCIDENTAL RELEASE MEASURES

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

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

#### 6.2 Environmental precautions

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

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

Accidental Release Measures. Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Avoid breathing dust. Environmental precautions: Do not let product enter drains. Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Lidocaine hydrochloride injections and commercially available solutions of the drug in 5% dextrose should be stored at 25 deg C but may be exposed to temperatures up to 40 deg C; the injection and solutions should not be frozen, and the solutions should be protected from excessive heat.

Keep away from direct sunlight

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure limit values

no data available

#### Biological limit values

no data available

### 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid
Color	White
Odour	Characteristic odor
Melting point/freezing point	148°C(lit.)
Boiling point or initial boiling point and boiling range	182°C/4mmHg(lit.)
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available

<b>Flash point</b>	53°C(lit.)
<b>Auto-ignition temperature</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	no data available
<b>Solubility</b>	DMSO: 250 mg/mL (1066.83 mM),Sonication is recommended. H2O: 21.34 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
<b>N-octanol-water partition coefficient</b>	no data available
<b>Vapour pressure</b>	4.28E-05mmHg at 25°C
<b>Density and/or relative density</b>	1.026g/cm3
<b>Relative vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

### 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

no data available

#### 10.2 Chemical stability

Commercially available solutions of lidocaine hydrochloride in 5% dextrose usually are stable for 18 months after the date of manufacture. Commercially available solutions of lidocaine hydrochloride in 5% dextrose may be provided in plastic containers.

#### 10.3 Possibility of hazardous reactions

no data available

#### 10.4 Conditions to avoid

no data available

#### 10.5 Incompatible materials

Incompatible materials: Strong oxidizing agents.

#### 10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of /nitrogen oxides/.

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

Oral: LD50 Mouse oral 292 mg/kg

Inhalation: no data available

Dermal: no data available

#### Skin corrosion/irritation

no data available

#### Serious eye damage/irritation

no data available

#### Respiratory or skin sensitization

no data available

#### Germ cell mutagenicity

no data available

### **Carcinogenicity**

no data available

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

no data available

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

no data available

## **12. ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: EC50; Species: *Chlorella fusca* var. *vacuolata* (Green Algae) strain 211-15; Conditions: freshwater, static, 25 deg C, pH 9.5-10.0; Concentration: 459 uM for 24 hr (95% confidence interval: 158-1333 uM); Effect: decreased population growth rate /formulation

Toxicity to microorganisms: no data available

### **12.2 Persistence and degradability**

AEROBIC: Half-lives of 92 and 110 days for laboratory and field experiments, respectively, have been reported using water collected from the river Nidda in Bad Vilbel, Germany; this river previously had been reported as receiving treated wastewater with high concentrations of lidocaine(1).

### **12.3 Bioaccumulative potential**

An estimated BCF of 3 was calculated in fish for lidocaine(SRC), using a log Kow of 2.44(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### **12.4 Mobility in soil**

Using a structure estimation method based on molecular connectivity indices(1), the Koc of lidocaine can be estimated to be 400(SRC). According to a classification scheme(2), this estimated Koc value suggests that lidocaine is expected to have moderate mobility in soil. The estimated pKa of lidocaine is 7.75(3), indicating that this compound will exist partially in the cation form in the environment and cations generally adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(4).

### **12.5 Other adverse effects**

no data available

## **13. DISPOSAL CONSIDERATIONS**

### **13.1 Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## **14. TRANSPORT INFORMATION**

### **14.1 UN Number**

no data available

### **14.2 UN Proper Shipping Name**

no data available

### 14.3 Transport hazard class(es)

no data available

### 14.4 Packing group, if applicable

no data available

### 14.5 Environmental hazards

no data available

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations specific for the product in question

European Inventory of Existing Commercial Chemical Substances (EINECS)	Listed.
EC Inventory	Listed.
United States Toxic Substances Control Act (TSCA) Inventory	Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Not Listed.
Korea Existing Chemicals List (KECL)	Not Listed.

## 16. OTHER INFORMATION

### Information on revision

**Creation Date** May 29, 2026

**Revision Date** May 29, 2026

### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>  
HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>  
IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>  
eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)  
CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>  
ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

## A DRUG SCREENING EXPERT

---

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

no data available

---

*Disclaimer: 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. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*

*All products are for Research Use Only · Not For Human or Veterinary or Therapeutic Use*