

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Dodecane-1-thiol

### 1.2 Other means of identification

**Product number** -  
**Other names** pennfloatm; dodecyl mercaptan; n-Dodecylthiol

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

**Identified uses** Industrial and scientific research use.  
**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Yansheng Internet Technology Co., Ltd  
**Address** 513, A3 / F, green space future center, Fengxian District, Shanghai, 201400, China  
**Telephone** +86-4000-6969-66

### 1.5 Emergency phone number

**Emergency phone number** +86-4000-6969-66  
**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

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## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Skin corrosion, Sub-category 1C  
Skin sensitization, Sub-category 1A  
Serious eye damage, Category 1  
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Danger  
**Hazard statement(s)** H314 Causes severe skin burns and eye damage  
H317 May cause an allergic skin reaction  
H410 Very toxic to aquatic life with long lasting effects  
**Precautionary statement(s)**  
**Prevention** P260 Do not breathe dust/fume/gas/mist/vapours/spray.

<b>Response</b>	<p>P264 Wash ... thoroughly after handling.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...</p> <p>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P316 Get emergency medical help immediately.</p> <p>P321 Specific treatment (see ... on this label).</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water/...</p> <p>P333+P317 If skin irritation or rash occurs: Get medical help.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P317 Get medical help.</p> <p>P391 Collect spillage.</p>
<b>Storage</b>	P405 Store locked up.
<b>Disposal</b>	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

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Dodecane-1-thiol	Dodecane-1-thiol	112-55-0	203-984-1	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Fresh air, rest. Refer for medical attention.

#### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower.

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Rinse mouth. Give one or two glasses of water to drink. Refer for medical attention .

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

Liquid is irritating to skin, eyes, and mucous membranes. Ingestion may cause nausea. Repeated skin exposure can cause dermatitis and may produce a sensitizing effect. (USCG, 1999)

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

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary. Anticipate seizures and treat if necessary. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport. Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal. Cover skin burns with dry sterile dressings after decontamination. Sulfur and related compounds

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## **SECTION 5: Fire-fighting measures**

### **5.1 Suitable extinguishing media**

Dry chem, or carbon dioxide. Water or foam may cause frothing. Water may be ineffective on fire. Cool exposed containers with water.

### **5.2 Specific hazards arising from the chemical**

Special Hazards of Combustion Products: Poisonous and irritating gases (e.g., sulfur dioxide) are generated in fires. (USCG, 1999)

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

Use powder, AFFF, foam, carbon dioxide.

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

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

Personal protection: self-contained breathing apparatus. Collect leaking and spilled liquid in sealable containers as far as possible. Carefully collect remainder.

### **6.2 Environmental precautions**

Personal protection: self-contained breathing apparatus. Collect leaking and spilled liquid in sealable containers as far as possible. Carefully collect remainder.

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

Collect leaking and spilled liquid in sealable containers as far as possible. Carefully collect remainder. Personal protection: self-contained breathing apparatus.

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## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

NO open flames. Above 88°C use a closed system and ventilation. 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**

Separated from strong oxidants. Separated from strong oxidants.

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## **SECTION 8: Exposure controls/personal protection**

### **8.1 Control parameters**

**Occupational Exposure limit values**

TLV: 0.1 ppm as TWA; (SEN)

**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 safety goggles or eye protection in combination with breathing protection.

### Skin protection

Protective gloves. Protective clothing.

### Respiratory protection

Use ventilation, local exhaust or breathing protection.

### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

<b>Physical state</b>	Lauryl mercaptan is an oily colorless liquid with a mild skunk odor. Freezing point 19°F. (USCG, 1999)
<b>Colour</b>	Colorless, water-white, or pale-yellow, oily liquid [Note: A solid below 15 degrees F].
<b>Odour</b>	MILD CHARACTERISTIC
<b>Melting point/freezing point</b>	-7°C
<b>Boiling point or initial boiling point and boiling range</b>	266-283°C(lit.)
<b>Flammability</b>	Class IIIA Combustible Liquid: Fl.P. at or above 140°F and below 200°F.
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	120°C
<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>	less than 1 mg/mL at 70° F (NTP, 1992)
<b>Partition coefficient n-octanol/water</b>	log Kow = 6.18 (est)
<b>Vapour pressure</b>	0.00861mmHg at 25°C
<b>Density and/or relative density</b>	0.845g/mL at 25°C(lit.)
<b>Relative vapour density</b>	7 (vs air)
<b>Particle characteristics</b>	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Decomposes on burning. This produces toxic gases. Reacts with strong oxidants.

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Combustible when exposed to heat or flame. LAURYL MERCAPTAN is incompatible with bases, oxidizing agents, reducing agents and alkali metals. Easily oxidized to disulfide. (NTP, 1992)

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

They will react with water, steam, or acids to produce toxic...vapors... Mercaptans

### 10.6 Hazardous decomposition products

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

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Mouse oral 4225 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

The substance is irritating to the eyes, skin and respiratory tract.

### STOT-repeated exposure

Repeated or prolonged contact may cause skin sensitization.

### Aspiration hazard

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

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## SECTION 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: no data available
- Toxicity to microorganisms: no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

An estimated BCF of 360 was calculated for 1-dodecanethiol(SRC), using an estimated log Kow of 6.18(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is moderate(SRC), provided the compound is not metabolized by the organism(SRC).

### 12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of 1-dodecanethiol can be estimated to be  $1.1 \times 10^4$ (SRC). According to a classification scheme(2), this estimated Koc value suggests that 1-dodecanethiol is expected to be immobile in soil.

### 12.5 Other adverse effects

no data available

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## SECTION 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.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: UN3265 (For reference only, please check.)

IMDG: UN3265 (For reference only, please check.)

IATA: UN3265 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 8 (For reference only, please check.)

IMDG: 8 (For reference only, please check.)

IATA: 8 (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

## SECTION 15: Regulatory information

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

Chemical name	Common names and synonyms	CAS number	EC number
Dodecane-1-thiol	Dodecane-1-thiol	112-55-0	203-984-1
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			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)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

## SECTION 16: Other information

### Information on revision

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### 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>
- 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

Do NOT take working clothes home.

Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)

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*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.*