

SAFETY DATA SHEETS

According to the UN GHS revision 9

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

SECTION 1: Identification

1.1 GHS Product identifier

Product name Dodecan-1-ol

1.2 Other means of identification

Product number -
Other names Dodecyl Alcohol; Lauryl Alcohol; Alcohol C12, Dodecyl alcohol, Lauryl alcohol

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 Yien Chemical Technology Co., Ltd
Address Building 6, 28 Yingong Road, Fengxian District, Shanghai
Chemical Industry Zone, Shanghai, 201400, China
Telephone +86-400-133-2688

1.5 Emergency phone number

Emergency phone number +86-400-133-2688
Service hours Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Eye irritation, Category 2
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Warning
Hazard statement(s) H319 Causes serious eye irritation
H400 Very toxic to aquatic life
H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention	P264 Wash ... thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/... P273 Avoid release to the environment.
Response	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P391 Collect spillage.
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

SECTION 3: Composition/information on ingredients**3.1 Substances**

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Dodecan-1-ol	Dodecan-1-ol	112-53-8	203-982-0	100%

SECTION 4: First-aid measures**4.1 Description of necessary first-aid measures****If inhaled**

Fresh air, rest. Seek medical attention if you feel unwell.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

Following eye contact

Rinse with plenty of water for several minutes (remove contact lenses if easily possible).

Following ingestion

Rinse mouth. Rest. Do NOT induce vomiting. Seek medical attention if you feel unwell.

4.2 Most important symptoms/effects, acute and delayed

Liquid will cause burning of the eyes and may irritate skin. (USCG, 1999)

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

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Higher alcohols (>3 carbons) and related compounds

SECTION 5: Fire-fighting measures**5.1 Suitable extinguishing media**

Wear self contained breathing apparatus for fire fighting if necessary.

5.2 Specific hazards arising from the chemical

Combustible.

5.3 Special protective actions for fire-fighters

Use water, dry powder, carbon dioxide, alcohol-resistant foam.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for organic gases and particulates adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Ventilation. Sweep spilled substance into sealable containers. If liquid: collect leaking liquid in containers. Absorb remaining liquid in inert absorbent. Then store and dispose of according to local regulations.

6.2 Environmental precautions

Personal protection: filter respirator for organic gases and particulates adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Ventilation. Sweep spilled substance into sealable containers. If liquid: collect leaking liquid in containers. Absorb remaining liquid in inert absorbent. Then store and dispose of according to local regulations.

6.3 Methods and materials for containment and cleaning up

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

SECTION 7: Handling and storage

7.1 Precautions for safe handling

NO contact with hot surfaces. 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

Cool. Well closed. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing. Keep tightly closed. Store in a cool dry place.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

Component	Dodecan-1-ol			
CAS No.	112-53-8			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m³	ppm	mg/m³
Germany (AGS)	20 (1)	155 (1)	20 (1)(2)	155 (1)(2)
Latvia		10		
	Remarks			
Germany (AGS)	(1) Inhalable aerosol and vapour (2) 15 minutes reference period			

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 spectacles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Solid. Paraffin like.
Colour	Colourless.
Odour	CHARACTERISTIC FATTY ODOR; UNPLEASANT AT HIGH CONCEN BUT DELICATE & FLORAL ON DILUTION
Melting point/freezing point	24 °C. Atm. press.:Ca. 101.3 kPa. Remarks:Pour point.
Boiling point or initial boiling point and boiling range	229 °C. Atm. press.:101.3 hPa. Remarks:Equilibrium boiling point (corrected).
Flammability	Combustible.
Lower and upper explosion limit/flammability limit	Flammability limits = 0.6 to 5.1 vol%
Flash point	Ca. 134.8 °C. Atm. press.:101.3 kPa.
Auto-ignition temperature	Ca. 275 °C. Atm. press.:Ca. 1 atm.
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	kinematic viscosity (in mm ² /s) = 11.251. Temperature:40°C.
Solubility	In water, 4 mg/L at 25 deg C
Partition coefficient n-octanol/water	log Pow = 5.4. Temperature:23 °C.
Vapour pressure	Ca. 0.038 mBar. Temperature:Ca. 38 °C. Remarks:Temperature measured: 100 °F.
Density and/or relative density	0.9 g/cm ³ . Temperature:16 °C.
Relative vapour density	7.4 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts violently with oxidizing materials and acids.

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

Combustible when it is exposed to heat or flame.DODECANOL is an alcohol. Flammable and/or toxic gases are generated by the combination of alcohols with alkali metals, nitrides, and strong reducing agents. They react with oxoacids and carboxylic acids to form esters

plus water. Oxidizing agents convert them to aldehydes or ketones. Alcohols exhibit both weak acid and weak base behavior. They may initiate the polymerization of isocyanates and epoxides.

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 acrid smoke and fumes.

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Rat oral 12,800 mg/kg
- Inhalation: LC50 Rat inhalation >1050 mg/cu m (138 ppm)
- Dermal: LD50 - rabbit (male/female) - 8 000 - 12 000 mg/kg bw.

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 skin, eyes and possibly the respiratory tract. If swallowed the substance may cause vomiting and could result in aspiration pneumonitis.

STOT-repeated exposure

See Notes.

Aspiration hazard

No indication can be given whether a harmful concentration in the air will be reached.

SECTION 12: Ecological information

12.1 Toxicity

- Toxicity to fish: LC50 - Pimephales promelas - 1.01 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - 0.765 mg/L - 48 h.
- Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - 0.33 mg/L - 72 h.
- Toxicity to microorganisms: EC0 - Pseudomonas putida - > 10 000 mg/L - 30 min.

12.2 Persistence and degradability

AEROBIC: A 5-day theoretical BOD of 20% was observed for 1-dodecanol in an aerobic screening test using a sewage inoculum(1). A 5-day theoretical BOD of 23.2% was observed for 1-dodecanol in a standard BOD dilution test using a mixed microbial inoculum(2-3). A 5-day theoretical BOD of 27-29.7% was observed for 1-dodecanol in a standard BOD aerobic screening test using a sewage inoculum or an acclimated activated sludge inoculum(4); using a Warburg respirometer technique and a sewage inoculum, a 6-hr theoretical BOD of 15.2% was observed(4). Using a Warburg respirometer technique and various activated sludge inoculum, respective 6-hr, 12-hr and 24-hr theoretical BODs of 4.5, 10.1 and 13.4% were observed(5). 1-Dodecanol was found to be readily biodegraded(6).

12.3 Bioaccumulative potential

An estimated BCF of 48 was calculated in fish for 1-dodecanol(SRC), using a log Kow of 5.13(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).

12.4 Mobility in soil

Koc values of 2042-3388 were reported for 1-dodecanol in humic acid(1). According to a classification scheme(2), this Koc range suggests that 1-dodecanol is expected to have slight mobility in soil. Koc values of 2570-6574, 2337-11,184, 7700 and 16,700-17,981 were reported for 1-dodecanol in activated sludge, sediment, suspended solids and suspended solids with activated sludge, respectively(1).

12.5 Other adverse effects

no data available

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.

SECTION 14: Transport information

14.1 UN Number

ADR/RID: UN3077 (For reference only, please check.)

IMDG: UN3077 (For reference only, please check.)

IATA: UN3077 (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID:
ENVIRONMENTALLY
HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (For
reference only, please check.)

IMDG:
ENVIRONMENTALLY
HAZARDOUS
SUBSTANCE, SOLID,
N.O.S. (For reference only,
please check.)

IATA:
ENVIRONMENTALLY
HAZARDOUS
SUBSTANCE, SOLID,
N.O.S. (For reference only,
please check.)

14.3 Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.)

IMDG: 9 (For reference only, please check.)

IATA: 9 (For reference only, please check.)

14.4 Packing group, if applicable

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

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

IATA: III (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
Dodecan-1-ol	Dodecan-1-ol	112-53-8	203-982-0
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)			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
- 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

Health effects of exposure to the substance have not been investigated adequately.

Any questions regarding this SDS, Please send your inquiry to sds@xixisys.com

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.