

## 1. IDENTIFICATION

Product name: Isodecanol

CAS No. : 68526-85-2

Brand: Macklin

Company: Shanghai Macklin Biochemical Co.,Ltd.

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## 2. HAZARDS IDENTIFICATION

GHS classification

PHYSICAL HAZARDS

no data available

HEALTH HAZARDS

no data available

ENVIRONMENTAL HAZARDS

no data available

GHS label elements, including precautionary statements

Pictograms or hazard symbols

Signal word

no data available

Hazard statements

no data available

Precautionary statements

Prevention

no data available

Response

no data available

Storage

no data available

Disposal

no data available

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components:Isodecanol

CAS No.:68526-85-2

Chemical Formula:C<sub>10</sub>H<sub>22</sub>O

## 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 and then wash skin with water and soap. Refer for medical attention .

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. Rest. Refer for medical attention .

4.2

Most important symptoms/effects, acute and delayed

Direct contact with skin can produce irritation. (USCG, 1999)

4.3

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

Basic Treatment: Establish a patent airway (oropharyngeal or nasopharyngeal airway, if needed).

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 shock and treat if necessary . 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 0.9% saline (NS) 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 . Higher alcohols (>3 carbons) and related compounds

## 5. FIRE-FIGHTING MEASURES

5.1

Suitable extinguishing media

Extinguish with dry chemical, alcohol foam, or carbon dioxide. Water may be ineffective on fire.

5.2

Specific hazards arising from the chemical

Excerpt from ERG Guide 171 [Substances (Low to Moderate Hazard)]: Some may burn but none ignite readily. Containers may explode when heated. Some may be transported hot. For UN3508, be aware of possible short circuiting as this product is transported in a charged state. (ERG, 2016)

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

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

6.3

Methods and materials for containment and cleaning up

Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place.

## 7. HANDLING AND STORAGE

### 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.

### Conditions for safe storage, including any incompatibilities

Separated from strong oxidants. Materials which are toxic as stored or which can decompose into toxic components ... should be stored in a cool well ventilated place, out of the direct rays of the sun, away from areas of high fire hazard, and should be periodically inspected. Incompatible materials should be isolated ...

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure limit values

no data available

Biological limit values

no data available

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

Set up emergency exits and the risk-elimination area.

Personal protective equipment

Eye/face protection

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

Skin protection

Wear fire/flammable 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

coa

Colour

5 (Pt/Co) scale, colourless.

Odour

WEAK ALCOHOLIC

Melting point/freezing point

-78 °C. Atm. press.:1 013 hPa.

Boiling point or initial boiling point and boiling range

217 - 224 °C. Atm. press.:1 013 hPa.

Flammability

Combustible.

Lower and upper explosion limit/flammability limit

no data available

Flash point

99 °C. Atm. press.:1 013 hPa.

Auto-ignition temperature

280 °C. Atm. press.:1 013 hPa.

Decomposition temperature

no data available

pH

no data available

Kinematic viscosity

kinematic viscosity (in mm<sup>2</sup>/s) = 21. Temperature:20°C.

Solubility

Insoluble in water

Partition coefficient n-octanol/water

log Pow = 3.8. Temperature:25 °C. Remarks:Weighted log Pow (range 3.8-3.8).

Vapour pressure

1.1 kPa. Temperature:100 °C. Remarks:The value was calculated based on the extrapolation by Clausius-Clapeyron.

Density and/or relative density  
0.838 g/cm<sup>3</sup>. Temperature:20 °C.  
Relative vapour density  
5.5 (AIR= 1)  
Particle characteristics  
no data available

## 10. STABILITY AND REACTIVITY

10.1

Reactivity

Reacts with strong oxidants.

10.2

Chemical stability

no data available

10.3

Possibility of hazardous reactions

Combustible when exposed to heat or flame. ISODECYL ALCOHOL attacks plastics. REF [Handling Chemicals Safely, 1980. p. 236]. Acetyl bromide reacts violently with alcohols or water, [Merck 11th ed., 1989]. Mixtures of alcohols with concentrated sulfuric acid and strong hydrogen peroxide can cause explosions. Example: An explosion will occur if dimethylbenzylcarbinol is added to 90% hydrogen peroxide then acidified with concentrated sulfuric acid. Mixtures of ethyl alcohol with concentrated hydrogen peroxide form powerful explosives. Mixtures of hydrogen peroxide and 1-phenyl-2-methyl propyl alcohol tend to explode if acidified with 70% sulfuric acid, [Chem. Eng. News 45(43):73(1967); J. Org. Chem. 28:1893(1963)]. Alkyl hypochlorites are violently explosive. They are readily obtained by reacting hypochlorous acid and alcohols either in aqueous solution or mixed aqueous-carbon tetrachloride solutions. Chlorine plus alcohols would similarly yield alkyl hypochlorites. They decompose in the cold and explode on exposure to sunlight or heat. Tertiary hypochlorites are less unstable than secondary or primary hypochlorites, [NFPA 491 M, 1991]. Base-catalysed reactions of isocyanates with alcohols should be carried out in inert solvents. Such reactions in the absence of solvents often occur with explosive violence, [Wischmeyer(1969)].

10.4

Conditions to avoid

no data available

10.5

Incompatible materials

Reacts with strong oxidants.

10.6

Hazardous decomposition products

When heated to decomposition it emits acrid smoke and irritating fumes.

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral: LD50 - rat (male) - > 2 648 mg/kg bw.

Inhalation: LC50 - Swiss albino mice, Wistar rats, English short-hair guinea pigs - > 95.3 ppm.

Dermal: LD50 - rabbit (male/female) - > 3.16 mL/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

no data available  
STOT-repeated exposure  
no data available  
Aspiration hazard  
no data available

## 12. ECOLOGICAL INFORMATION

### 12.1

#### Toxicity

Toxicity to fish: LC50 - *Oncorhynchus mykiss* (previous name: *Salmo gairdneri*) - 3.1 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EL50 - *Daphnia magna* - 6.2 mg/L - 48 h.

Toxicity to algae: ChV - Green alga - 1.252 mg/L - 96 h.

Toxicity to microorganisms: no data available

### 12.2

#### Persistence and degradability

AEROBIC: In sewage, isodecyl alcohol gave a theoretical oxygen demand of 24, 44, 42 and 39 percent in 5, 10, 15 and 20 days, respectively(1). In acclimated sewage isodecyl alcohol gave theoretical oxygen demand of 14, 26, 45 and 32 percent in 5, 10, 15 and 20 days, respectively(1). Isodecyl alcohol gave theoretical oxygen demand of 6, 17, 34 and 40 percent in 5, 10, 15 and 20 days, respectively, in seawater(1). In a manometric study of poorly soluble compounds, isodecyl alcohol degraded 17.4 and 22.4 percent of ultimate BOD/theoretical oxygen demand with 10 minutes of sonification(2).

### 12.3

#### Bioaccumulative potential

An estimated BCF of 145 was calculated for isodecyl alcohol(SRC), using an estimated log Kow of 3.71(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is high(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 isodecyl alcohol can be estimated to be 81(SRC). According to a classification scheme(2), this estimated Koc value suggests that isodecyl alcohol is expected to have high mobility in soil.

### 12.5

#### Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

#### 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

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

### 14.2

#### UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.3

Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.4

Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.5

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6

Special precautions for user

no data available

14.7

Transport in bulk according to IMO instruments

no data available

## 15. REGULATORY INFORMATION

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

EC number

271-234-0

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.

## 16. OTHER INFORMATION

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions

and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.