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## Material Safety Data Sheet

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifiers

Product name 1,2-Dimethoxyethane  
Product number W320086  
Brand 3ASenrise  
CAS number 110-71-4

#### 1.2 Details of the supplier of the safety data sheet

Company: Anhui Senrise Technology Co., Ltd.  
Address: No.88 Weisan Road, High-Tech Industrial Development Zone, Anqing, Anhui  
Post code: 246003  
Tel: 400-005-6266  
Fax: 0556-5555368  
Email: service@3asenrise.com

#### 1.3 Emergency telephone

Emergency telephone: 0556-5500208

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

Identified uses: For R&D use only. Not for pharmaceutical, household or other uses.

### 2 HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Flammable liquids (Category 2), H225  
Acute toxicity, Inhalation (Category 4), H332  
Skin corrosion/irritation (Category 2), H315  
Reproductive toxicity (Category 1B), H360

#### 2.2 GHS label elements, including precautionary statements

##### Pictogram



**Signal word: Danger**

##### Hazard statement(s)

H225 Highly Flammable liquid and vapour.  
H315 Causes skin irritation.  
H332 Harmful if inhaled.  
H360 May damage fertility or the unborn child.

##### Precautionary statement(s)

## Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

## Response

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P332+P313 IF SKIN irritation occurs: Get medical advice/attention.

P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

## Storage

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

## Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

## 2.3 Physical and chemical hazards

H225 Highly Flammable liquid and vapour.

## 2.4 Health hazards

H315 Causes skin irritation.

H332 Harmful if inhaled.

H360 May damage fertility or the unborn child.

## 2.5 Environmental hazards Code

No data available

## 2.6 Other hazards

No data available

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

### Substance / Mixture: Substance

#### 3.1 Substance

Name	1,2-Dimethoxyethane
Formula	C4H10O2
Molecular Weight	90.12
CAS	110-71-4
Concentration	99%, stabilized with BHT

## 4 FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### **If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### **In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

#### **In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### **If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### **4.2 Most important symptoms and effects, both acute and delayed**

No data available.

## **5 FIREFIGHTING MEASURES**

### **5.1 Extinguishing media**

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

### **5.2 Special hazards arising from the substance or mixture**

Carbon oxides Combustible. Pay attention to flashback. Vapors are heavier than air and may spread along floors. Development of hazardous combustion gases or vapours possible in the event of fire. Forms explosive mixtures with air at ambient temperatures.

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

## **6 ACCIDENTAL RELEASE MEASURES**

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

### **6.2 Environmental precautions**

Do not let product enter drains.

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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

### **6.4 Reference to other section**

For disposal see section 13.

## **7 HANDLING AND STORAGE**

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

#### **Advice on safe handling**

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

#### **Advice on protection against fire and explosion**

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### **Hygiene measures**

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

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

#### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and

sources of ignition.

Long term storage: RT

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

No data available.

### 8.2 Personal protective equipment

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses.

#### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

#### Body protection

Flame retardant antistatic protective clothing.

#### Respiratory protection

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

#### Control of environmental exposure

Do not let product enter drains. Risk of explosion.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

a) Appearance	Colorless liquid
b) Odor	ether-like
c) pH	ca. 7neutral
d) Melting point/freezing point	-58 ° C - lit.
e) Initial boiling point and boiling range	85 ° C - lit.
f) Upper/lower flammability or explosive limits	Upper explosion limit: 10.4 %(V) Lower explosion limit: 1.6 %(V)
g) Flash point	5 ° C - closed cup
h) Evaporation rate	No data available
i) Vapor pressure	87 hPa at 25 ° C
j) Vapor density	3.11 - (Air = 1.0)
k) Density	0.867 g/cm <sup>3</sup> at 25 ° C - lit.
l) Water solubility	1.000 g/l at 25 ° C - soluble
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	No data available
o) Decomposition temperature	No data available
p) Flammability	No data available

## 10 STABILITY AND REACTIVITY

### 10.1 Chemical stability

No data available.

### 10.2 Conditions to avoid

No data available.

### 10.3 Incompatible materials

Strong acids, Strong oxidizing agents

### 10.4 Hazardous decomposition products

In the event of fire: see section 5.

## 11 TOXICOLOGICAL INFORMATION

### **11.1 Acute toxicity**

LD50 Oral

- Rat - female - 5,370 mg/kg

LC50 Inhalation

No data available

LD50 Dermal

- Rat - female - > 5,000 mg/kg

### **11.2 Skin corrosion/irritation**

Skin - Rabbit Result: Irritating to skin. - 24 h

### **11.3 Serious eye damage/eye irritation**

Eyes - Rabbit Result: No eye irritation - 24 h

### **11.4 Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse Result: negative  
Remarks: The value is given in analogy to the following substances: 1-ethoxy-2-(2-methoxyethoxy)ethane

### **11.5 Germ cell mutagenicity**

Not mutagenic in Ames Test. Did not show mutagenic effects in animal experiments. Test Type: unscheduled DNA synthesis assay Test system: Human lymphocytes Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 482 Result:

### **11.6 Carcinogenicity**

No data available

### **11.7 Reproductive toxicity**

May damage the unborn child. May damage fertility.

### **11.8 Specific target organ toxicity - single exposure**

No data available

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

No data available

### **11.10 Aspiration hazard**

no data available.

### **11.11 Additional Information**

RTECS: KI1451000 narcosis, Exposure to and/or consumption of alcohol may increase toxic effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## **12 ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish:

static test LC50 - Danio rerio (zebra fish) - > 5,000 mg/l - 96 h

Toxicity to daphnia and other aquatic:

semi-static test EC50 - Daphnia magna (Water flea) - 4,000 mg/l - 48 h

Toxicity to algae:

static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 9,120 mg/l - 72 h

Toxicity to bacteria:

static test EC50 - activated sludge - > 6,400 mg/l - 3 h

### **12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 48 d Result: 16 % - According to the results of tests of biodegradability this product is not readily biodegradable. Chemical Oxygen Demand (COD) 1,700 mg/g

### **12.3 Bioaccumulative potential**

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

#### **12.4 Mobility in soil**

No data available

#### **12.5 Other adverse effects**

No data available

### **13 DISPOSAL CONSIDERATIONS**

#### **13.1 Waste treatment methods**

##### **Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Observe all federal, state and local regulations when disposing of the substance.

##### **Contaminated packaging**

Disposal must be made according to official regulations.

### **14 TRANSPORT INFORMATION**

#### **14.1 UN number**

ADR/RID: 2252 IMDG: 2252 IATA: 2252

#### **14.2 UN proper shipping name**

ADR/RID: 1,2DIMETHOXYETHANE

IMDG: 1,2DIMETHOXYETHANE

IATA-DGR: 1,2DIMETHOXYETHANE

#### **14.3 Transport hazard class(es)**

ADR/RID: 3 IMDG: 3 IATA: 3

#### **14.4 Packaging group**

ADR/RID: II IMDG: II IATA: II

#### **14.5 Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

#### **14.6 Special precautions for user**

No data available

### **15. REGULATORY INFORMATION**

#### **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Applicable regulations

Regulations on the Control over Safety of Dangerous Chemicals.

This product is included in the list of dangerous chemicals.

Please pay attention to waste disposal and meet the requirements of local regulations.

### **16. OTHER INFORMATION**

#### **Abbreviations and acronyms**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Dangerous Goods

IATA: International Air Transport Association

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

CAS: Chemical Abstracts Service (division of the American Chemical Society)

#### **Further information**

The above safety technical information is for reference only, because many physical and chemical properties are not entirely clear. Please consult information carefully before use and use after confirmation.

Anhui Senrise Technology Co., Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product. More terms of use, see invoice information for details.

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