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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	Dicyclohexylamine
Product number	W820003
Brand	3ASenrise
CAS number	101-83-7

#### 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

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Dermal (Category 3), H311

Skin corrosion/irritation (Category 1B), H314

Serious eye damage/eye irritation (Category 1), H318

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

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

##### Pictogram



**Signal word: Danger**

##### Hazard statement(s)

H301+H311 Toxic if swallowed or in contact with skin.

H314 Causes severe skin burns and eye damage.

H410 Very toxic to aquatic life with long lasting effects.

## Precautionary statement(s)

### Prevention

P264 Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

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

### Response

P301+P310+P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. Rinse mouth.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

P304+P340+P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.

P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.

P391 Collect spillage. Hazardous to the aquatic environment

### Storage

P405 Store locked up.

### Disposal

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

## 2.3 Physical and chemical hazards

No data available

## 2.4 Health hazards

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

## 2.5 Environmental hazards Code

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

## 2.6 Other hazards

No data available

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

### Substance / Mixture: Substance

#### 3.1 Substance

Name Dicyclohexylamine

Formula C12H23N

Molecular Weight 181.32

CAS 101-83-7

Concentration 99%

## 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**

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

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

Carbon oxides Nitrogen oxides (NO<sub>x</sub>) Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

### **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: No data available

## **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 to yellow brown liquid
b) Odor	No data available
c) pH	11 at 1 g/l at 20 ° C
d) Melting point/freezing point	-2 ° C
e) Initial boiling point and boiling range	256 ° C at 1,013 hPa
f) Upper/lower flammability or explosive limits	No data available
g) Flash point	96 ° C - closed cup
h) Evaporation rate	No data available
i) Vapor pressure	16 hPa at 37.7 ° C
j) Vapor density	No data available
k) Density	0.91 g/cm3 at 20 ° C
l) Water solubility	0.8 g/l at 25 ° C
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	255 ° C
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

No data available

### 10.4 Hazardous decomposition products

In the event of fire: see section 5.

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Acute toxicity

LD50 Oral

- Rat - male - 200 mg/kg

## LC50 Inhalation

- Rat - male - 6 h - > 1.4 mg/l - vapor

## LD50 Dermal

- Rabbit - male and female - 200 - 316 mg/kg

## 11.2 Skin corrosion/irritation

Skin - Rabbit Result: Causes burns. - 24 h

## 11.3 Serious eye damage/eye irritation

Eyes - Rabbit Result: Severe eye irritation

## 11.4 Respiratory or skin sensitization

No data available

## 11.5 Germ cell mutagenicity

Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without

metabolic activation Result: negative Species: Mouse Method: Mutagenicity (micronucleus test)

Result: negative

## 11.6 Carcinogenicity

No data available

## 11.7 Reproductive toxicity

No data available

## 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

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) - 40 mg/kg RTECS: HY4025000 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:

semi-static test LC50 - Oryzias latipes - 12 mg/l - 96 h

Toxicity to daphnia and other aquatic:

Immobilization EC50 - Daphnia magna (Water flea) - 8 mg/l - 48 h static test EC50 - Daphnia magna (Water flea) - 8 mg/l - 48 h

Toxicity to algae:

EC50 - Desmodesmus subspicatus (green algae) - 3.3 mg/l - 72 h

Toxicity to bacteria:

No data available

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 14 d Result: 76.9 % - Readily biodegradable.

### 12.3 Bioaccumulative potential

No data available

### 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: 2565 IMDG: 2565 IATA: 2565

### 14.2 UN proper shipping name

ADR/RID: Dicyclohexylamine

IMDG: Dicyclohexylamine

IATA-DGR: Dicyclohexylamine

### 14.3 Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

### 14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

### 14.5 Environmental hazards

ADR/RID: yes IMDG Marine pollutant: yes 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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