

## Material Safety Data Sheet

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

#### 1.1 Product identifiers

|                |                     |
|----------------|---------------------|
| Product name   | 2,4-Dichloroaniline |
| Product number | D050230             |
| Brand          | 3ASenrise           |
| CAS number     | 554-00-7            |

#### 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 4), H302

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - single exposure (Category 1), H370

Specific target organ toxicity - repeated exposure (Category 1), H372

Short-term (acute) aquatic hazard (Category 2), H401

Long-term (chronic) aquatic hazard (Category 2), H411

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

##### Pictogram



**Signal word: Danger**

##### Hazard statement(s)

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

## **Precautionary statement(s)**

### **Prevention**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

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

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

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.

P302+P352+P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.

P304+P340+P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

P314 Get medical advice/attention if you feel unwell.

P391 Collect spillage. Hazardous to the aquatic environment

### **Storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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.

H331 Toxic if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

## **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             | 2,4-Dichloroaniline                             |
| Formula          | C <sub>6</sub> H <sub>5</sub> Cl <sub>2</sub> N |
| Molecular Weight | 162.02  |
| CAS              | 554-00-7  |
| Concentration    | 98%   |

# **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 Nitrogen oxides (NO<sub>x</sub>) Hydrogen chloride gas 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 even

#### **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                                   | White to off-white solid         |
| b) Odor   | characteristic                   |
| c) pH   | No data available                |
| d) Melting point/freezing point                 | 59 - 62 ° C                      |
| e) Initial boiling point and boiling range      | 245 ° C                          |
| f) Upper/lower flammability or explosive limits | No data available                |
| g) Flash point                                  | 115 ° C - closed cup             |
| h) Evaporation rate                             | No data available                |
| i) Vapor pressure                               | No data available                |
| j) Vapor density                                | No data available                |
| k) Density                                      | 1.56 g/cm <sup>3</sup> at 20 ° C |
| l) Water solubility                             | 0.62 g/l at 25 ° C               |
| 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

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 - 1,600 mg/kg

LC50 Inhalation

No data available

LD50 Dermal

No data available

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

Skin – Rabbit Result: No skin irritation

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

No data available

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

No data available

### **11.5 Germ cell mutagenicity**

Test Type: Ames test Test system: Salmonella typhimurium 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**

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. This substance should be handled with particular care. After absorption: Cyanosis Dizziness Headache Damage to: Liver Kidney Danger of cumulative effects. The following applies to aromatic amines in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discolouration of the blood).

## **12 ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish:

LC50 – Danio rerio (zebra fish) – 9 mg/l – 96 h

Toxicity to daphnia and other aquatic:

EC50 – Daphnia magna (Water flea) – 1.3 mg/l – 48 h

Toxicity to algae:

EC50 – Phaeodactylum tricorutum – 1.1 mg/l – 72 h

Toxicity to bacteria:

EC50 – Bacteria – 19 mg/l – 3 h

### **12.2 Persistence and degradability**

Biodegradability Result: > 95 % – Readily eliminated from water

### **12.3 Bioaccumulative potential**

Bioaccumulation Danio rerio (zebra fish) – 96 h – 32.4 µg/l (2,4-Dichloroaniline)

Bioconcentration factor (BCF): 94.7

### **12.4 Mobility in soil**

No data available

### **12.5 Other adverse effects**

Biological effects: Forms toxic mixtures in water, dilution measures notwithstanding.

Discharge into the environment must be avoided.

## **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: 3442 IMDG: 3442 IATA: 3442

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

ADR/RID: DICHLOROANILINES, SOLID

IMDG: DICHLOROANILINES, SOLID

IATA-DGR: DICHLOROANILINES, SOLID

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

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

### **14.4 Packaging group**

ADR/RID: II IMDG: II IATA: II

### **14.5 Environmental hazards**

ADR/RID: no 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.

Tel: +86 -400-005-6266 Fax: +86 -0556-5555368 E-mail: Service@3asenrise.com

Add: No.88 Weisan Road, High-Tech Industrial Development Zone, Anqing, Anhui