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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 | Dichloroacetic acid |
| Product number | W810048 |
| Brand | 3ASenrise |
| CAS number | 79-43-6 |

### 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: +8653283889090

### 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

Corrosive to Metals (Category 1), H290
Acute toxicity, Oral (Category 5), H303
Acute toxicity, Dermal (Category 3), H311
Skin corrosion/irritation (Category 1), H314
Serious eye damage/eye irritation (Category 1), H318
Carcinogenicity (Category 2), H351
Reproductive toxicity (Category 1B), H360
Effects on or via lactation, H362
Specific target organ toxicity - repeated exposure, Oral (Category 2), Brain, Liver, Testes, H373
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 3), H412

### 2.2 GHS label elements, including precautionary statements

**Pictogram**

**Signal word: Danger**

**Hazard statement(s)**

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

H351 Suspected of causing cancer.

H360 May damage fertility or the unborn child.

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

H290 May be corrosive to metals.

H303 May be harmful if swallowed.

H311 Toxic in contact with skin.

H362 May cause harm to breast-fed children.

**Precautionary statement(s)**

**Prevention**

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

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

P234 Keep only in original container.

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

P264 Wash hands thoroughly after handling.

P273 Avoid release to the environment.

P201 Obtain special instructions before use.

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

P263 Avoid contact during pregnancy/while nursing.

**Response**

P390 Absorb spillage to prevent material damage.

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

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P391 Collect spillage. Hazardous to the aquatic environment

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

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.

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

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

**Storage**

P405 Store locked up.

P406 Store in corrosive resistant container with a resistant inner liner.

**Disposal**

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

**2.3 Physical and chemical hazards**

H290 May be corrosive to metals.

**2.4 Health hazards**

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.
H373 May cause damage to organs through prolonged or repeated exposure.
H303 May be harmful if swallowed.
H311 Toxic in contact with skin.
H362 May cause harm to breast-fed children.

### 2.5 Environmental hazards Code

H400 Very toxic to aquatic life.

### 2.6 Other hazards

No data available

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

### Substance / Mixture: Substance

### 3.1 Substance

| | |
|---|---|
| Name | Dichloroacetic acid |
| Formula | C2H2Cl2O2 |
| Molecular Weight | 128.94 |
| CAS | 79-43-6 |
| 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

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

Carbon oxides Hydrogen chloride gas Combustible. Fire may cause evolution of: Hydrogen chloride gas Phosgene Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion

### 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 light yellow liquid or solid |
| b) Odor | pungent |
| c) pH | 1.2 at 129 g/l at 20 ° C |
| d) Melting point/freezing point | 13.5 ° C |

| | |
|---|---|
| e) Initial boiling point and boiling range | 193 - 195 ° C at 1,013.25 hPa |
| f) Upper/lower flammability or explosive limits | No data available |
| g) Flash point | 113 ° C - closed cup |
| h) Evaporation rate | No data available |
| i) Vapor pressure | 0.19 hPa at 20 ° C |
| j) Vapor density | 4.45 - (Air = 1.0) |
| k) Density | 1.567 g/cm3 at 20 ° C |
| l) Water solubility | 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

Gives off hydrogen by reaction with metals.

### 10.4 Hazardous decomposition products

In the event of fire: see section 5.

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Acute toxicity

LD50 Oral

- Rat - 2,820 mg/kg

LC50 Inhalation

No data available

LD50 Dermal

- Rabbit - 797 mg/kg

### 11.2 Skin corrosion/irritation

Skin - Rabbit (Dichloroacetic Acid) Result: Causes severe burns.

### 11.3 Serious eye damage/eye irritation

Eyes - Rabbit (Dichloroacetic Acid) Result: Causes serious eye damage. Causes serious eye damage. (Dichloroacetic Acid)

### 11.4 Respiratory or skin sensitization

No data available

### 11.5 Germ cell mutagenicity

Test Type: In vitro mammalian cell gene mutation test (Dichloroacetic Acid) Test system: mouse lymphoma cells Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 476 Result: negative Test Type: Ames test (Dichloroacetic

### 11.6 Carcinogenicity

Suspected of causing cancer. (Dichloroacetic Acid)

### 11.7 Reproductive toxicity

May damage the unborn child. (Dichloroacetic Acid) May damage fertility. Studies indicating a hazard to babies during the lactation period (Dichloroacetic Acid)

### 11.8 Specific target organ toxicity - single exposure

No data available

### 11.9 Specific target organ toxicity - repeated exposure

Oral - May cause damage to organs through prolonged or repeated exposure. - Brain, Liver, Testes

### 11.10 Aspiration hazard

no data available.

### 11.11 Additional Information

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Cough, Shortness of breath, Headache, Nausea (Dichloroacetic Acid) To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Dichloroacetic Acid)

## 12 ECOLOGICAL INFORMATION

### 12.1 Toxicity

Toxicity to fish:

No data available

Toxicity to daphnia and other aquatic:

EC50 - Daphnia magna (Water flea) - 106 mg/l - 24 h

Toxicity to algae:

No data available

Toxicity to bacteria:

No data available

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 15 d (Dichloroacetic Acid) Result: 93 % - Readily biodegradable.

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Other adverse effects

Forms corrosive mixtures with water even if diluted. Discharge into the environment must be avoided. Very toxic to aquatic life.

## 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: 1764 IMDG: 1764 IATA: 1764

### 14.2 UN proper shipping name

ADR/RID: DICHLOROACETIC ACID

IMDG: DICHLOROACETIC ACID

IATA-DGR: Dichloroacetic acid

### 14.3 Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

### 14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

### 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.

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