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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                      Nitrilotriacetic acid  
Product number                  A010394  
Brand                                3ASenrise  
CAS number                        139-13-9

#### 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  
Serious eye damage/eye irritation (Category 2A), H319  
Carcinogenicity (Category 2), H351

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

##### Pictogram



**Signal word: Warning**

##### Hazard statement(s)

H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.

##### Precautionary statement(s)

##### Prevention

P201 Obtain special instructions before use.

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

P264 Wash hands thoroughly after handling.

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

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

### Response

P301+P312+P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

P337+P313 IF eye irritation persists: Get medical advice/attention.

### 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

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

## 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	Nitrilotriacetic acid
Formula	C <sub>6</sub> H <sub>9</sub> N <sub>3</sub> O <sub>6</sub>
Molecular Weight	191.14
CAS	139-13-9
Concentration	98% (NMR)

# 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>)

### **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	odorless
c) pH	1.7 – 2.7 at 10 g/l at 23 ° C
d) Melting point/freezing point	245 ° C – dec.
e) Initial boiling point and boiling range	No data available
f) Upper/lower flammability or explosive limits	No data available
g) Flash point	100 ° C – closed cup
h) Evaporation rate	No data available
i) Vapor pressure	< 0.1 hPa at 25 ° C
j) Vapor density	No data available
k) Density	1.67 g/cm <sup>3</sup>
l) Water solubility	1.28 g/l at 22.5 ° C
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	> 400 ° C at 1,013 hPa
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 and female – 1,580 mg/kg

LC50 Inhalation

No data available

LD50 Dermal

– Rabbit – male and female – > 10,000 mg/kg

### 11.2 Skin corrosion/irritation

Skin – Rabbit Result: No skin irritation

### 11.3 Serious eye damage/eye irritation

Eyes – Rabbit Result: Irritating to eyes. – 24 h

### 11.4 Respiratory or skin sensitization

Buehler Test – Guinea pig Result: negative

### 11.5 Germ cell mutagenicity

No data available

### 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 – Rabbit – Dermal – NOAEL (No observed adverse effect level) – 50mg/kg

RTECS: AJ0175000

## **12 ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish:

flow-through test LC50 – Pimephales promelas (fathead minnow) – 114 mg/l – 96 h

Toxicity to daphnia and other aquatic:

static test EC50 – Daphnia magna (Water flea) – 560 – 1,000 mg/l – 48 h

Toxicity to algae:

static test ErC50 – Desmodesmus subspicatus (green algae) – > 100 mg/l – 72 h

Toxicity to bacteria:

microtox test EC50 – Photobacterium phosphoreum – 1,003 mg/l – 15 min

### **12.2 Persistence and degradability**

Biodegradability aerobic – Exposure time 14 d Result: 89 % – 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: – IMDG: – IATA: –

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

ADR/RID: Not applicable

IMDG: Not applicable

IATA-DGR: Not applicable

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

ADR/RID: – IMDG: – IATA: –

#### **14.4 Packaging group**

ADR/RID: - IMDG: - IATA: -

#### **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

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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