

# Material Safety Data Sheet

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

### 1.1 Product identifiers

Product name	Cyanamide
Product number	B010004
Brand	3ASenrise
CAS number	420-04-2

### 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

Skin sensitization (Category 1), H317

Carcinogenicity (Category 2), H351

Reproductive toxicity (Category 2), H361

Specific target organ toxicity - repeated exposure (Category 2), Thyroid, H373

Short-term (acute) aquatic hazard (Category 3), H402

Long-term (chronic) aquatic hazard (Category 3), H412

### 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.

H317 May cause an allergic skin reaction.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

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

H412 Harmful to aquatic life with long lasting effects.

## **Precautionary statement(s)**

### **Prevention**

P201 Obtain special instructions before use.

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

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.

P272 Contaminated work clothing should not be allowed out of the workplace.

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.

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

P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

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

### **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.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H351 Suspected of causing cancer.

H361 Suspected of damaging fertility or the unborn child.

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

## **2.5 Environmental hazards Code**

H402 Harmful to aquatic life.

H412 Harmful 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	Cyanamide
Formula	CH <sub>2</sub> N <sub>2</sub>
Molecular Weight	42.04
CAS	420-04-2
Concentration	95%

## 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>) Combustible. 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: 2–8° C

## 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	No data available
c) pH	No data available
d) Melting point/freezing point	45 – 46 ° C – lit.
e) Initial boiling point and boiling range	83 ° C at 0.7 hPa – lit.
f) Upper/lower flammability or explosive limits	No data available
g) Flash point	No data available
h) Evaporation rate	No data available
i) Vapor pressure	< 0.1 hPa at 20 ° C
j) Vapor density	No data available
k) Density	1.23 g/cm <sup>3</sup> at 20 ° C
l) Water solubility	560 g/l at 20 ° C – soluble log Pow: –0.72 at 20 ° C – Bioaccumulation is

m) Partition coefficient: n-octanol/water	not expected.
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 oxidizing agents, Strong reducing agents, Bases, acids, Iron and iron salts., Steel (all types and surface treatments), Brass, Lead

### **10.4 Hazardous decomposition products**

In the event of fire: see section 5.

## **11 TOXICOLOGICAL INFORMATION**

### **11.1 Acute toxicity**

LD50 Oral

No data available

LC50 Inhalation

- Rat - 4 h - > 1 mg/l - dust/mist

LD50 Dermal

- Rabbit - 848 mg/kg

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

Skin - Rabbit Result: Causes burns.

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

No data available

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

Maximization Test - Guinea pig Result: Causes sensitization.

### **11.5 Germ cell mutagenicity**

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster ovary cells Metabolic activation: with and without metabolic activation Result: positive

### **11.6 Carcinogenicity**

Suspected of causing cancer.

### **11.7 Reproductive toxicity**

Suspected of damaging the unborn child. Suspected of damaging fertility.

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

No data available

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

May cause damage to organs through prolonged or repeated exposure. - Thyroid

### **11.10 Aspiration hazard**

no data available.

### **11.11 Additional Information**

RTECS: GS5950000

## **12 ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish:

static test LC50 - Oncorhynchus mykiss (rainbow trout) - 45.6 mg/l - 96 h

Toxicity to daphnia and other aquatic:

static test EC50 - Daphnia magna (Water flea) - 3.2 mg/l - 48 h

Toxicity to algae:

static test EC50 - Pseudokirchneriella subcapitata (green algae) - 16.6 mg/l - 96 h

Toxicity to bacteria:

No data available

## **12.2 Persistence and degradability**

Biodegradability aerobic - Exposure time 28 d Result: 0 % - Not 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: 2923 IMDG: 2923 IATA: 2923

## **14.2 UN proper shipping name**

ADR/RID: CORROSIVESOLID, TOXIC, N. O. S. (Cyanamide)

IMDG: CORROSIVESOLID, TOXIC, N. O. S. (Cyanamide)

IATA-DGR: Corrosive solid, toxic, n. o. s. (Cyanamide)

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

ADR/RID: 8(6.1) IMDG: 8(6.1) IATA: 8(6.1)

## **14.4 Packaging group**

ADR/RID: III IMDG: III IATA: III

## **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.

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