

## Material Safety Data Sheet

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

#### 1.1 Product identifiers

Product name	Triphenylphosphine
Product number	W610007
Brand	3ASenrise
CAS number	603-35-0

#### 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

Skin corrosion/irritation (Category 2), H315

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

Skin sensitization (Category 1), H317

Specific target organ toxicity – single exposure (Category 3), respiratory tract irritation, H335

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

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

##### Pictogram



**Signal word: Danger**

##### **Hazard statement(s)**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

### **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.

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

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.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/ doctor if you feel unwell.

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

P314 Get medical advice/attention if you feel unwell.

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

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

#### **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**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

H372 Causes damage to organs through prolonged or repeated exposure.

### **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 Triphenylphosphine

Formula C18H15P

Molecular Weight 262.29

CAS 603-35-0

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 Oxides of phosphorus 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: 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 solid
b) Odor	odorless
c) pH	No data available
d) Melting point/freezing point	79 – 81 ° C
e) Initial boiling point and boiling range	377 ° C
f) Upper/lower flammability or explosive limits	No data available
g) Flash point	180 ° 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	1.07 g/cm3 at 80 ° C
l) Water solubility	0.00017 g/l at 22 ° C
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	425 ° C at 983 hPa – Relative self-ignition temperature for solids
o) Decomposition temperature	No data available
p) Flammability	The product is not flammable.

## 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 - 700 mg/kg

LC50 Inhalation

- Rat - male - 4 h - 12.5 mg/l - aerosol

LD50 Dermal

- Rabbit - male and female - > 4,000 mg/kg

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

Skin - Rabbit Result: No skin irritation - 20 h

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

Eyes - Rabbit Result: Causes serious eye damage.

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

Maximization Test - Guinea pig Result: positive

#### **11.5 Germ cell mutagenicity**

Test Type: Ames test Test system: S. typhimurium Metabolic activation: with and without metabolic activation Result: negative Test Type: In vitro mammalian cell gene mutation test Test system: Chinese hamster ovary cells Metabolic activation: with and wi

#### **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**

Inhalation - Causes damage to organs through prolonged or repeated exposure. - Central nervous system, Peripheral nervous system

#### **11.10 Aspiration hazard**

no data available.

#### **11.11 Additional Information**

RTECS: SZ3500000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Liver - Irregularities - Based on Human Evidence

### **12 ECOLOGICAL INFORMATION**

#### **12.1 Toxicity**

Toxicity to fish:

static test LC50 - Leuciscus idus (Golden orfe) - > 10,000 mg/l - 96 h

Toxicity to daphnia and other aquatic:

static test EC50 - Daphnia magna (Water flea) - > 5 mg/l - 48 h

Toxicity to algae:

static test NOEC - Desmodesmus subspicatus (green algae) - > 5 mg/l - 72 h Remarks: (above the solubility limit in the test medium) static test ErC50 - Desmodesmus subspicatus (green algae) - > 5 mg/l - 72 h Remarks: (above the solubility limit in the t

Toxicity to bacteria:

static test EC50 – Pseudomonas putida – > 10,000 mg/l – 0.5 h

## 12.2 Persistence and degradability

Biodegradability aerobic – Exposure time 28 d Result: < 20 % – Not 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

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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