

# Material Safety Data Sheet

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

### 1.1 Product identifiers

Product name	Potassium persulfate
Product number	EB000443
Brand	3ASenrise
CAS number	7727-21-1

### 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

Oxidizing solids (Category 3), H272  
Acute toxicity, Oral (Category 4), H302  
Skin corrosion/irritation (Category 2), H315  
Serious eye damage/eye irritation (Category 2A), H319  
Respiratory sensitization (Category 1), H334  
Skin sensitization (Category 1), H317  
Specific target organ toxicity - single exposure (Category 3), respiratory tract irritation, H335  
Short-term (acute) aquatic hazard (Category 3), H402

### 2.2 GHS label elements, including precautionary statements

#### Pictogram



Signal word: Danger

Hazard statement(s)

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H402 Harmful to aquatic life.

### **Precautionary statement(s)**

#### **Prevention**

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P220 Keep/Store away from clothing/combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P261 Avoid breathing 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.

P273 Avoid release to the environment.

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

P284 Wear respiratory 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.

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

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

P342+P311 IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P370+P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

#### **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**

H272 May intensify fire; oxidizer.

### **2.4 Health hazards**

H302 Harmful if swallowed.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

### **2.5 Environmental hazards Code**

H402 Harmful to aquatic life.

## 2.6 Other hazards

No data available

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

### Substance / Mixture: Substance

#### 3.1 Substance

Name	Potassium persulfate
Formula	K <sub>2</sub> S <sub>2</sub> O <sub>8</sub>
Molecular Weight	270.32
CAS	7727-21-1
Concentration	AR, ≥99.5%

## 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 extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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

Sulfur oxides Potassium oxides Container explosion may occur under fire conditions. Not combustible. Has a fire-promoting effect due to release of oxygen. Ambient fire may liberate hazardous vapours.

### 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	2.5 - 4.5 at 27 g/l at 25 ° C
d) Melting point/freezing point	100 ° C
e) Initial boiling point and boiling range	No data available
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 25 ° C
j) Vapor density	9.33 - (Air = 1.0)
k) Density	2.477 g/cm <sup>3</sup>

l) Water solubility	52.77 g/l at 20 ° C- soluble
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	> 600 ° C
o) Decomposition temperature	170 ° C
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 - female - 700 mg/kg

LC50 Inhalation

- Rat - male and female - 4 h -  $\geq$  2.95 mg/l - dust/mist

LD50 Dermal

- Rat - male and female - > 2,000 mg/kg

### 11.2 Skin corrosion/irritation

Remarks: Causes skin irritation.

### 11.3 Serious eye damage/eye irritation

Eyes - Rabbit Result: Causes serious eye irritation. Remarks: The value is given in analogy to the following substances: Ammonium peroxodisulphate Remarks:

### 11.4 Respiratory or skin sensitization

Freund's complete adjuvant 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 Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: disodium peroxodisulphate

### 11.6 Carcinogenicity

No data available

### 11.7 Reproductive toxicity

No data available

### 11.8 Specific target organ toxicity - single exposure

May cause respiratory irritation. - Respiratory system Remarks:

### 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 - Rat - male - Oral - 90 Days - NOAEL (No observed adverse effect level) - 91 mg/kg - LOAEL (Lowest observed adverse effect level) - 200 mg/kg Remarks: (in analogy to similar products) RTECS: SE0400000 To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## **12 ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Toxicity to fish:

static test LC50 - Oncorhynchus mykiss (rainbow trout) - 76.3 mg/l - 96 h

Toxicity to daphnia and other aquatic:

static test EC50 - Daphnia magna (Water flea) - 120 mg/l - 48 h Remarks: (in analogy to similar products) (ECHA) The value is given in analogy to the following substances: Ammonium peroxodisulphate

Toxicity to algae:

static test ErC50 - Phaeodactylum tricornutum - 320 mg/l - 72 h

Toxicity to bacteria:

static test EC50 - Pseudomonas putida - 36 mg/l - 18 h

### **12.2 Persistence and degradability**

The methods for determining biodegradability are to inorganic substances.

### **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: 1492 IMDG: 1492 IATA: 1492

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

ADR/RID: POTASSIUMPERSULPHATE

IMDG: POTASSIUMPERSULPHATE

IATA-DGR: POTASSIUMPERSULPHATE

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

ADR/RID: 5.1 IMDG: 5.1 IATA: 5.1

### **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

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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