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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	Lead monoxide
Product number	A60704
Brand	3ASenrise
CAS number	1317-36-8

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
Acute toxicity, Inhalation (Category 4), H332
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 1B), H350
Reproductive toxicity (Category 1A), H360
Effects on or via lactation, H362
Specific target organ toxicity - repeated exposure (Category 2), H373
Short-term (acute) aquatic hazard (Category 1), H400
Long-term (chronic) aquatic hazard (Category 1), H410

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word: Danger

Hazard statement(s)

H410 Very toxic to aquatic life with long lasting effects.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360 May damage fertility or the unborn child.

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

H362 May cause harm to breast-fed children.

H302+H332 Harmful if swallowed or if inhaled.

Precautionary statement(s)

Prevention

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

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

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

P264 Wash hands thoroughly after handling.

P273 Avoid release to the environment.

P271 Use only outdoors or in a well-ventilated area.

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

P391 Collect spillage. Hazardous to the aquatic environment

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

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

Call a POISON CENTER/ doctor if you feel unwell.

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

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

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

H360 May damage fertility or the unborn child.

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

H362 May cause harm to breast-fed children.

2.5 Environmental hazards Code

H400 Very toxic to aquatic life.

H410 Very toxic 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 Lead monoxide

Formula PbO

Molecular Weight	223.20
CAS	1317-36-8
Concentration	99%, yellow powder

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

Lead oxides Not combustible. 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	Yellow powder
b) Odor	odorless
c) pH	8 – 9 at 100 g/l at 20 ° C (slurry)
d) Melting point/freezing point	886 ° C – lit.
e) Initial boiling point and boiling range	> 600 ° C at ca. 1,013 hPa
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	No data available
j) Vapor density	No data available
k) Density	9.530 g/cm ³ at 20 ° C
l) Water solubility	0.0702 g/l at 20 ° C- slightly soluble
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	No data available
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

No data available

LC50 Inhalation

No data available

LD50 Dermal

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

11.2 Skin corrosion/irritation

Skin – Rabbit Result: No skin irritation – 4 h

11.3 Serious eye damage/eye irritation

Eyes – Rabbit Result: No eye irritation – 72 h

11.4 Respiratory or skin sensitization

Maximization Test – Guinea pig Result: negative

11.5 Germ cell mutagenicity

Test Type: Micronucleus test Species: Rat Cell type: Red blood cells (erythrocytes)

Application Route: Oral Result: positive Test Type: comet assay Species: Mouse Cell type:

Liver cells Application Route: Inhalation Result: negative

11.6 Carcinogenicity

No data available

11.7 Reproductive toxicity

May damage the unborn child. Positive evidence from human epidemiological studies. Studies indicating a hazard to babies during the lactation period

11.8 Specific target organ toxicity - single exposure

No data available

11.9 Specific target organ toxicity - repeated exposure

Causes damage to organs through prolonged or repeated exposure. – Central nervous system, Kidney, Blood

11.10 Aspiration hazard

no data available.

11.11 Additional Information

RTECS: OG1750000 Lead salts have been reported to cross the placenta and to induce embryo- and feto- mortality. They also have teratogenic effect in some animal species. No teratogenic effects have been reported with exposure to organometallic lead compounds. Adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal (e.g. mental) development have been reported. Excessive exposure can affect blood, nervous, and digestive systems. The synthesis of hemoglobin is inhibited and results in anemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death. Anorexia. Vomiting, Convulsions, Nausea, Headache, Weakness, anemia 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) – 0.1 mg/l – 96 h

Toxicity to daphnia and other aquatic:

EC50 – Daphnia magna (Water flea) – 0.13 mg/l – 48 h

Toxicity to algae:

static test EC10 – Skeletonema costatum (marine diatom) – 0.0294 mg/l – 96 h

Toxicity to bacteria:

No data available

12.2 Persistence and degradability

The methods for determining the biological degradability are to inorganic substances.

Biodegradability Result: – According to the results of tests of biodegradability this product is 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: 2291 IMDG: 2291 IATA: 2291

14.2 UN proper shipping name

ADR/RID: LEAD MONOXIDE

IMDG: LEAD MONOXIDE

IATA-DGR: Lead monoxide

14.3 Transport hazard class(es)

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

14.4 Packaging group

ADR/RID: III IMDG: III IATA: III

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.

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