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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	1,2-Phenylenediamine
Product number	B010221
Brand	3ASenrise
CAS number	95-54-5

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: +8653283889090

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, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312
Serious eye damage/eye irritation (Category 2A), H319
Skin sensitization (Category 1), H317
Germ cell mutagenicity (Category 2), H341
Carcinogenicity (Category 2), H351
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)

H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H301 Toxic if swallowed.
H312+H332 Harmful in contact with skin or if inhaled.

Precautionary statement(s)

Prevention

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.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
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.

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 IF eye irritation persists: Get medical advice/attention.
P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage. Hazardous to the aquatic environment
P308+P313 IF exposed or concerned: Get medical advice/attention.
P301+P310+P330 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.Rinse mouth.
P304+P340+P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P302+P352+P312 IF ON SKIN: Wash with plenty of water.Call a POISON CENTER/doctor if you feel unwell.

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.
H312 Harmful in contact with skin.
H332 Harmful if inhaled.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H301 Toxic if swallowed.

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	1,2-Phenylenediamine
Formula	C6H8N2
Molecular Weight	108.14
CAS	95-54-5
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 (CO2) Dry powder

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) 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: No data available

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 tan solid
b) Odor	No data available
c) pH	8.7
d) Melting point/freezing point	100 - 102 ° C
e) Initial boiling point and boiling range	256 - 258 ° C
f) Upper/lower flammability or explosive limits	Lower explosion limit: 1.5 %(V)
g) Flash point	136 ° C - closed cup
h) Evaporation rate	No data available
i) Vapor pressure	0.001 hPa at 20 ° C
j) Vapor density	No data available
k) Density	0.72 g/cm3 at 24 ° C
l) Water solubility	39.3 g/l at 20 ° C
m) Partition coefficient: n-octanol/water	No data available
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

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 - male - 4 h - 3.6 mg/l - dust/mist

LD50 Dermal

No data available

11.2 Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation - 4 h

11.3 Serious eye damage/eye irritation

Eyes - Rabbit Result: Eye irritation - 72 h

11.4 Respiratory or skin sensitization

Maximization Test - Guinea pig Result: May cause sensitization by skin contact.

11.5 Germ cell mutagenicity

In vitro tests showed mutagenic effects Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: Metabolic activation Method: OECD Test Guideline 471 Result: positive Test Type: Micronucleus test Species: Guinea pig Application Route

11.6 Carcinogenicity

Limited evidence of carcinogenicity in animal studies

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 - Rat - male - Oral - NOAEL (No observed adverse effect level) - 400 mg/kg Exposure can cause numbness, tingling, and weakness in extremities. Nausea, Dizziness, Headache, Central nervous system depression, 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:

flow-through test LC50 - Oncorhynchus mykiss (rainbow trout) - 42.9 mg/l - 96 h
Toxicity to daphnia and other aquatic:
semi-static test EC50 - Daphnia magna (Water flea) - 1.4 mg/l - 48 h
Toxicity to algae:
static test EC50 - Pseudokirchneriella subcapitata - 0.16 mg/l - 96 h
Toxicity to bacteria:
EC50 - Bacteria - 580 mg/l - 3 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d Result: 0 % - Not biodegradable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Other adverse effects

Discharge into the environment must be avoided. Further information on ecology Forms toxic mixtures in water, dilution measures notwithstanding. Biological effects:

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: 1673 IMDG: 1673 IATA: 1673

14.2 UN proper shipping name

ADR/RID: 1,2-PHENYLENEDIAMINE
IMDG: 1,2-PHENYLENEDIAMINE
IATA-DGR: 1,2-Phenylenediamine

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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