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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	Phthalic anhydride
Product number	EB000550
Brand	3ASenrise
CAS number	85-44-9

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 irritation (Category 2), H315

Serious eye damage (Category 1), H318

Respiratory sensitization (Category 1), H334 Skin sensitization (Category 1), H317

Specific target organ toxicity – single exposure (Category 3), Respiratory system, H335

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.

H318 Causes serious eye damage.

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

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+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.

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

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

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.

H318 Causes serious eye damage.

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	Phthalic anhydride
Formula	C8H4O3
Molecular Weight	148. 12
CAS	85-44-9

Concentration

AR, $\geq 99.5\%$

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

Carbon dioxide (CO₂) Dry powder

5.2 Special hazards arising from the substance or mixture

Carbon oxides

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	No data available
c) pH	2 at 6 g/l at 20 ° C
d) Melting point/freezing point	131.6 ° C
e) Initial boiling point and boiling range	284 ° C at 1,013 hPa
f) Upper/lower flammability or explosive limits	Upper explosion limit: 10.4 % (V) Lower explosion limit: 1.7 % (V)
g) Flash point	152 ° C
h) Evaporation rate	No data available
i) Vapor pressure	0.001 hPa at 26,6 ° C
j) Vapor density	No data available
k) Density	1.53 g/cm3 at 20 ° C
l) Water solubility	16,400 g/l at 20 ° C - soluble
m) Partition coefficient: n-octanol/water	No data available
n) Autoignition temperature	580 ° C
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

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 - male - 1,530 mg/kg

LC50 Inhalation

- Rat - 4 h - > 2.14 mg/l - aerosol

LD50 Dermal

- Rabbit - > 3,160 mg/kg

11.2 Skin corrosion/irritation

Skin - Rabbit Result: slight irritation - 4 h

11.3 Serious eye damage/eye irritation

Eyes - Rabbit Result: Moderate eye irritation - 7 d

11.4 Respiratory or skin sensitization

Maximization Test - Guinea pig Result: positive (OECD Test Guidel

11.5 Germ cell mutagenicity

Test Type: Ames test Test system: Escherichia coli/Salmonella typhimurium Metabolic

activation: with and without metabolic activation Result: negative

11.6 Carcinogenicity

No data available

11.7 Reproductive toxicity

No data available

11.8 Specific target organ toxicity - single exposure

Inhalation - May cause respiratory irritation. - Respiratory Tract

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 and female - Oral - 7 Weeks - NOAEL (No observed adverse effect level) - 1.250 mg/kg - LOAEL (Lowest observed adverse effect level) - 2.500mg/kg prolonged or repeated exposure can cause: Liver injury may occur. Kidney injury may occur. Exposure to and/or consumption of alcohol may increase toxic effects.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish:

LC50 - Oryzias latipes - > 99 mg/l - 96 h

Toxicity to daphnia and other aquatic:

Immobilization EC50 - Daphnia magna (Water flea) - 71 mg/l - 48 h

Toxicity to algae:

ErC50 - Pseudokirchneriella subcapitata - 68 mg/l - 72 h

Toxicity to bacteria:

EC50 - activated sludge - > 1,000 mg/l - 3 h EC50 - Pseudomonas putida - 213 mg/l - 16 h

12.2 Persistence and degradability

Biodegradability Biotic/Aerobic - Exposure time 14 d Result: 85 % - Readily 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.

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: 2214 IMDG: 2214 IATA: 2214

14.2 UN proper shipping name

ADR/RID: PHTHALICANHYDRIDE withmorethan0.05%ofmaleicanhydride

IMDG: PHTHALICANHYDRIDE withmorethan0.05%ofmaleicanhydride

IATA-DGR: PHTHALICANHYDRIDE withmorethan0.05%ofmaleicanhydride

14.3 Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

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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