SAFETY DATA SHEETS

According to the UN GHS revision 8

Version: 1.0
Creation Date: July 15, 2024
Revision Date: July 15, 2024

1. Identification

1.1 GHS Product identifier

Product name

1.2 Other means of identification

Product number A70831

Other names

1.3 Recommended use of the chemical and restrictions on use

Identified uses	Specialized Industrial Chemicals
Uses advised against	no data available

1.4 Supplier's details

Company	Tianjin Psaitong Biomedical Technology Co., Ltd
	Beijing Psaitong Biotechnology Co., Ltd
Address	Building 145, Yougu New Science Park, Qingguang Town, Beichen District, Tianjin City
Tel/Fax	+86-10-60605840

1.5 Emergency phone number

Emergency phone number	+86-10-60605840
Service hours	Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

2. Hazard identification

2.1 Classification of the substance or mixture

Acute toxicity - Oral, Category 4

2.2 GHS label elements, including precautionary statements

Pictogram(s)

Signal word	Warning
Hazard statement(s)	H302 Harmful if swallowed
Precautionary statement(s)	
Prevention	P264 Wash ... thoroughly after handling.
	P270 Do not eat, drink or smoke when using this product.
Response	P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor/…if you feel unwell.
	P330 Rinse mouth.
Storage	none
Disposal	P501 Dispose of contents/container to an appropriate treatment and disposal facility in

accordance with applicable laws and regulations, and product characteristics at time of disposal.

2.3 Other hazards which do not result in classification

no data available

3. Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Ammonium hydrogencarbonate	Ammonium hydrogencarbonate	1066-33-7	213-911-5	100%

4. First-aid measures

4.1 Description of necessary first-aid measures

General advice

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

If inhaled

Fresh air, rest.

Following skin contact

Rinse skin with plenty of water or shower.

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth.

4.2 Most important symptoms/effects, acute and delayed

Inhalation may cause respiratory irritation. Ingestion could be harmful. Contact with eyes or skin causes irritation. (USCG, 1999)

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Ammonia and related compounds

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

If material involved in fire: Extinguish fire using agent suitable for type of surrounding fire (material itself does not burn or burns with difficulty).

5.2 Specific hazards arising from the chemical

Special Hazards of Combustion Products: Irritating and toxic ammonia gas may form in fires. Behavior in Fire: Decomposes, but reaction is not explosive. Ammonia gas is formed. (USCG, 1999)

5.3 Special protective actions for fire-fighters

In case of fire in the surroundings, use appropriate extinguishing media.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: filter respirator for ammonia and organic ammonia derivatives in conjunction with particulate filter adapted to

the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

6.2 Environmental precautions

Personal protection: filter respirator for ammonia and organic ammonia derivatives in conjunction with particulate filter adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Wash away remainder with plenty of water.

6.3 Methods and materials for containment and cleaning up

Environmental considerations: Water spill: Neutralize with dilute acid.

7. Handling and storage

7.1 Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants, strong bases and acids. Cool.Store below 33 deg C

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear safety spectacles.

Skin protection

Protective gloves.

Respiratory protection

Use ventilation, local exhaust or breathing protection.

Thermal hazards

no data available

9. Physical and chemical properties

Physical state	Solid. Crystalline powder.
Colour	White.
Odour	Faint odor of ammonia
Melting point/ freezing point	107 °C.
Boiling point or initial boiling point and boiling range	Remarks:Boiling point can not be determined.
Flammability	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit / flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	no data available
Decomposition temperature	35-60°C
pH	About 8,0 (5 % solution)

Kinematic viscosity	no data available
Solubility	Freely soluble in water. Insoluble in ethanol
Partition coefficient n-octanol/water	log Pow = -2.4. Temperature:25 °C.
Vapour pressure	78.5 hPa. Temperature:25.4 °C.
Density and/or relative density	1.59 g/cm³. Temperature:20 °C.
Relative vapour density	2.7 (vs air)
Particle characteristics	no data available

10. Stability and reactivity

10.1 Reactivity

Decomposes above 35°C . This produces ammonia fumes. Reacts violently with acids. Reacts with strong bases and strong oxidants.

10.2 Chemical stability

Comparatively stable at room temp; ... the white fumes given off consist of ammonium 21.5%, carbon dioxide 55.7%, water vapor 22.8%; rate of decomposition increases as temperature rises.

10.3 Possibility of hazardous reactions

Ammonium bicarbonate may burn, but does not readily ignite.AMMONIUM BICARBONATE decomposes when heated above 36°C, releasing ammonia and carbon dioxide gases; it can also be decomposed into ammonia and carbon dioxide by strong acids and strong bases [Handling Chemicals Safely 1980 p. 141].

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

Decomposes above 34 deg C with formation of ammonia gas.

11. Toxicological information

Acute toxicity

- Oral: LD50 - rat (male/female) - ca. 1 576 mg/kg bw.
- Inhalation: LC50 - rat (male/female) - > 4.74 mg/L air.
- Dermal: LD50 - rat (male/female) - > 2 000 mg/kg bw.

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

The substance is irritating to the eyes and respiratory tract.

STOT-repeated exposure

no data available

Aspiration hazard

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

12. Ecological information

12.1 Toxicity

- Toxicity to fish: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 63.4 mg/L - 96 h. Remarks:Ammonium hydrogencarbonate.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Ceriodaphnia acanthina - 145.6 mg/L - 48 h. Remarks:Ammonium hydrogencarbonate.
- Toxicity to algae: EC50 - Chlorella vulgaris - ca. 1 921 mg/L - 5 d.
- Toxicity to microorganisms: EC20 - activated sludge, domestic - 1 256 mg/L - 30 min. Remarks:Ammonium hydrogencarbonate.

12.2 Persistence and degradability

no data available

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 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. Transport information

14.1 UN Number

ADR/RID: Not dangerous goods. (For reference only, please check.)	IMDG: Not dangerous goods. (For reference only, please check.)	IATA: Not dangerous goods. (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: Not dangerous goods. (For reference only, please check.)	IMDG: Not dangerous goods. (For reference only, please check.)	IATA: Not dangerous goods. (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: Not dangerous goods. (For reference only, please check.)	IMDG: Not dangerous goods. (For reference only, please check.)	IATA: Not dangerous goods. (For reference only, please check.)

14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For reference only, please check.)

IMDG: Not dangerous goods. (For reference only, please check.)

IATA: Not dangerous goods. (For reference only, please check.)

14.5 Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

no data available

15. Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Ammonium hydrogencarbonate	Ammonium hydrogencarbonate	1066-33-7	213-911-5
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

16. Other information

Information on revision

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
- HSDB - Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
- IARC - International Agency for Research on Cancer, website: http://www.iarc.fr/
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple
- ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:

http://www.phmsa.dot.gov/hazmat/library/erg

- Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
- ECHA - European Chemicals Agency, website: https://echa.europa.eu/
