

SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0
Creation Date: July 15, 2019
Revision Date: July 15, 2019

SECTION 1: Identification

1.1 GHS Product identifier

Product name Dipotassium peroxodisulphate

1.2 Other means of identification

Product number -
Other names dipotassium,sulfonatooxy sulfate;

1.3 Recommended use of the chemical and restrictions on use

Identified uses Industrial and scientific research use.
Uses advised against no data available

1.4 Supplier's details

Company Shanghai Baishun Biotechnology Co., Ltd
Address No. 26, Lane 918, Lianye Road, Zhelin Town, Fengxian District, Shanghai, 201400, China
Telephone +86-21-37581181

1.5 Emergency phone number

Emergency phone number +86-21-37581181
Service hours Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Oxidizing solids, Category 3
Acute toxicity - Category 4, Oral
Skin irritation, Category 2
Eye irritation, Category 2
Skin sensitization, Category 1
Specific target organ toxicity – single exposure, Category 3
Respiratory sensitization, Category 1

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger

Hazard statement(s)	H272 May intensify fire; oxidizer H302 Harmful if swallowed H315 Causes skin irritation H319 Causes serious eye irritation H317 May cause an allergic skin reaction H335 May cause respiratory irritation H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
Precautionary statement(s)	
Prevention	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/... P264 Wash ... thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P272 Contaminated work clothing should not be allowed out of the workplace. P271 Use only outdoors or in a well-ventilated area. P284 [In case of inadequate ventilation] wear respiratory protection.
Response	P370+P378 In case of fire: Use ... to extinguish. P301+P317 IF SWALLOWED: Get medical help. P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of water/... P321 Specific treatment (see ... on this label). P332+P317 If skin irritation occurs: Get medical help. P362+P364 Take off contaminated clothing and wash it before reuse. 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+P317 If skin irritation or rash occurs: Get medical help. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P319 Get medical help if you feel unwell. P342+P316 If experiencing respiratory symptoms: Get emergency medical help immediately.
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 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

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Dipotassium peroxodisulphate	Dipotassium peroxodisulphate	7727-21-1	231-781-8	100%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled

Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

Following skin contact

First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again.

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. Give one or two glasses of water to drink. Refer for medical attention .

4.2 Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 140 [Oxidizers]: Inhalation, ingestion or contact (skin, eyes) with vapors or substance may cause severe injury, burns or death. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may cause pollution. (ERG, 2016)

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

no data available

SECTION 5: Fire-fighting measures**5.1 Suitable extinguishing media**

Excerpt from ERG Guide 140 [Oxidizers]: SMALL FIRE: Use water. Do not use dry chemicals or foams. CO2 or Halon® may provide limited control. LARGE FIRE: Flood fire area with water from a distance. Do not move cargo or vehicle if cargo has been exposed to heat. Move containers from fire area if you can do it without risk. FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. (ERG, 2016)

5.2 Specific hazards arising from the chemical

Excerpt from ERG Guide 140 [Oxidizers]: These substances will accelerate burning when involved in a fire. Some may decompose explosively when heated or involved in a fire. May explode from heat or contamination. Some will react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, oil, clothing, etc.). Containers may explode when heated. Runoff may create fire or explosion hazard. (ERG, 2016)

5.3 Special protective actions for fire-fighters

In case of fire in the surroundings, use appropriate extinguishing media. In case of fire: keep drums, etc., cool by spraying with water.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Do NOT absorb in saw-dust or other combustible absorbents. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Cautiously neutralize remainder. Wash away remainder with plenty of water.

6.2 Environmental precautions

Do NOT absorb in saw-dust or other combustible absorbents. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Cautiously neutralize remainder. Wash away remainder with plenty of water. Do NOT let this chemical enter the environment. Personal protection: particulate filter respirator adapted to the airborne concentration of the substance.

6.3 Methods and materials for containment and cleaning up

Cover with reducing agents such as hypo, bisulfites or ferrous salts. Bisulfites or ferrous salts need additional promoter of some 3M sulfuric acid to accelerate reaction. Transfer the slurry (or sludge) into a large container of water and neutralize with soda ash. Drain into a sewer with abundant water.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

NO contact with combustible substances. 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

Cool. Dry. Well closed. Separated from combustible substances, reducing agents and strong bases. Keep containers closed and store in cool dark places.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

TLV: 0.1 mg/m³, as TWA

Biological 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 goggles or eye protection in combination with breathing protection.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Solid. Crystalline.
Colour	White.
Odour	ODORLESS
Melting point/freezing point	Atm. press.:100.66 kPa.
Boiling point or initial boiling point and boiling range	Atm. press.:100.79 kPa.
Flammability	Not combustible but enhances combustion of other substances. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion	no data available

limit/flammability limit	
Flash point	Not°Combustible
Auto-ignition temperature	> 600 °C. Remarks:No self ignition observed under the test conditions.
Decomposition temperature	<100°C
pH	AQUEOUS SOLN IS ACIDIC
Kinematic viscosity	no data available
Solubility	Partially miscible with water
Partition coefficient n-octanol/water	no data available
Vapour pressure	< 0 mm Hg. Temperature:25 °C. Remarks:Estimation: 6.07 E-30 mm Hg => 8.09 E-28 Pa.
Density and/or relative density	1.26 g/cm³. Temperature:20 °C.
Relative vapour density	9.3 (vs air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

Heating may cause violent combustion or explosion. Decomposes on heating. This produces toxic fumes including sulfur oxides. The substance is a strong oxidant. It reacts with combustible and reducing materials. The solution in water is a medium strong acid. Reacts violently with chlorates and perchlorates. This generates explosion hazard. Reacts in the presence of water with metals such as aluminium. This generates fire hazard.

10.2 Chemical stability

Gradually decomp losing avail oxygen, more quickly at higher temp, completely at about 100 deg c

10.3 Possibility of hazardous reactions

POTASSIUM PERSULFATE PLUS A LITTLE POTASSIUM HYDROXIDE & WATER IGNITED POLYTHENE (POLYETHYLENE) LINER OF CONTAINER BY SIMULTANEOUS RELEASE OF HEAT & OXYGEN.POTASSIUM PERSULFATE is an oxidizing agent. Noncombustible but accelerates the burning of combustible material. Potassium persulfate plus a little potassium hydroxide and water released sufficient heat and oxygen to ignite a polythene (polyethylene) liner in a container. [MCA Case History 1155. 1955].

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Potassium persulfate plus a little potassium hydroxide & water ignited polythene (polyethylene) liner of container by simultaneous release of heat & oxygen.

10.6 Hazardous decomposition products

Dangerous when heated to decomp, emits highly toxic fumes of /sulfur oxides/.

SECTION 11: Toxicological information

Acute toxicity

- Oral: no data available
- Inhalation: no data available
- 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, skin and respiratory tract. Inhalation of dust may cause asthma-like reactions.

STOT-repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. Repeated or prolonged contact may cause skin sensitization. Repeated or prolonged inhalation may cause asthma. May cause a general allergic reaction, such as urticaria or shock.

Aspiration hazard

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly on spraying or when dispersed, especially if powdered.

SECTION 12: Ecological information**12.1 Toxicity**

- Toxicity to fish: LC50 - *Oncorhynchus mykiss* (previous name: *Salmo gairdneri*) - 76.3 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 120 mg/L - 48 h.
- Toxicity to algae: EC50 - *Phaeodactylum tricornutum* - 136 mg/L - 72 h.
- Toxicity to microorganisms: EC10 - *Pseudomonas putida* - 36 mg/L - 18 h.

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

SECTION 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.

SECTION 14: Transport information

14.1 UN Number

ADR/RID: UN1492 (For reference only, please check.)

IMDG: UN1492 (For reference only, please check.)

IATA: UN1492 (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: POTASSIUM PERSULPHATE (For reference only, please check.)

IMDG: POTASSIUM PERSULPHATE (For reference only, please check.)

IATA: POTASSIUM PERSULPHATE (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: 5.1 (For reference only, please check.)

IMDG: 5.1 (For reference only, please check.)

IATA: 5.1 (For reference only, please check.)

14.4 Packing group, if applicable

ADR/RID: III (For reference only, please check.)

IMDG: III (For reference only, please check.)

IATA: III (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 IMO instruments

no data available

SECTION 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
Dipotassium peroxodisulphate	Dipotassium peroxodisulphate	7727-21-1	231-781-8
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			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.

SECTION 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/>

Other Information

Rinse contaminated clothing with plenty of water because of fire hazard. The symptoms of asthma often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Anyone who has shown symptoms of asthma due to this substance should avoid all further contact with this substance. Do NOT take working clothes home.

Any questions regarding this SDS, Please send your inquiry to sds@xixisys.com

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.