

Chemical Safety Data Sheet MSDS / SDS

Potassium binoxalate

Revision Date:2026-05-31 Revision Number:1

SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product identifier**

Product name : Potassium binoxalate
CBnumber : CB1199602
CAS : 127-95-7
EINECS Number : 204-873-0
Synonyms : Potassium binoxalate,Potassium hydrogen oxalate

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.
Uses advised against : none

Company Identification

Company : Chemicalbook
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing
Telephone : 010-86108875

SECTION 2: Hazards identification**Classification of the substance or mixture**

Acute toxicity - Category 4, Oral
Acute toxicity - Category 4, Dermal

Label elements**Pictogram(s)**

☐

Signal word : Danger

Hazard statement(s)

H302 Harmful if swallowed
H312 Harmful in contact with skin

Precautionary statement(s)**Prevention**

P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

Response

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P317 Get medical help.

P321 Specific treatment (see ... on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

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.

Other hazards

no data available

SECTION 3: Composition/information on ingredients

Substance

Product name	: Potassium binoxalate
Synonyms	: Potassium binoxalate, Potassium hydrogen oxalate
CAS	: 127-95-7
EC number	: 204-873-0
MF	: C ₂ HKO ₄
MW	: 128.13

SECTION 4: First aid measures

Description of first aid measures

If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately.

Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Inhalation of dust causes irritation of nose and throat. Ingestion causes burning pain in throat, esophagus, and stomach; exposed areas of

mucous membrane turn white; vomiting, severe purging, weak pulse, and cardiovascular collapse; if death is delayed, neuromuscular symptoms develop. Contact with dust irritates eyes and may cause mild irritation of skin. (USCG, 1999)

Indication of any immediate medical attention and special treatment needed

Minimum/Potential Fatal Human Dose

4. 4= very toxic: probable oral lethal dose (human) 50-500 mg/kg, between 1 teaspoon & 1 oz for 70 kg person (150 lb). oxalate salts

Absorption, Distribution and Excretion

Oxalates are well absorbed from intestine...not burned in body, but unite with tissue & blood calcium & are excreted by kidney. oxalates

SECTION 5: Firefighting measures

Extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

Specific Hazards Arising from the Chemical

no data available

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

SECTION 7: Handling and storage

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.

Conditions for safe storage, including any incompatibilities

Materials which are toxic as stored or which can decompose into toxic components...should be stored in a cool well ventilated place, out of direct rays of sun, away from areas of high fire hazard, and should be periodically inspected... incompatible materials should be isolated... oxalates

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

Exposure controls

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

Individual protection measures

Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties

Information on basic physicochemical properties

Physical state	Solid
Colour	Monoclinic, colorless crystals
Odour	no data available
Melting point/freezing point	195 °C.
Boiling point or initial boiling point and boiling range	365.1°C at 760 mmHg
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	188.8°C
Auto-ignition temperature	> 400 °C. Remarks:At atmospheric pressure.

Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	DMSO
Partition coefficient n-octanol/water	log Pow = -1.7. Temperature:23 °C.
Vapour pressure	Ca. 0.002 Pa. Temperature:20 °C.
Density and/or relative density	2.054 g/cm ³ . Temperature:20 °C.
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

Reactivity

Hygroscopic. Gives basic solution, below 50°C dissolves in water and reacts to form the much less soluble potassium tetraoxalate, which separates out.

Chemical stability

no data available

Possibility of hazardous reactions

Salts, basic, such as POTASSIUM HYDROGEN OXALATE, are generally soluble in water. The resulting solutions contain moderate concentrations of hydroxide ions and have pH's greater than 7.0. They react as bases to neutralize acids. These neutralizations generate heat, but less or far less than is generated by neutralization of the bases in reactivity group 10 (Bases) and the neutralization of amines. POTASSIUM HYDROGEN OXALATE is a weak reducing agent, and may release carbon dioxide upon reaction with oxidizing agents.

Conditions to avoid

no data available

Incompatible materials

no data available

Hazardous decomposition products

Dangerous; when heated to decomposition, they emit toxic and irritating fumes. oxalates

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 - rat (male) - 9.5 mL/kg bw. Remarks:(475 mg/kg bw).
- Inhalation: no data available
- Dermal: LD50 - rabbit - 20 000 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

no data available

STOT-repeated exposure

no data available

Aspiration hazard

no data available

SECTION 12: Ecological information**Toxicity**

Toxicity to fish: LC0 - *Leuciscus idus melanotus* - 250 mg/L - 48 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 162.2 mg/L - 48 h.

Toxicity to algae: Toxicity threshold - *Microcystis aeruginosa* - 80 mg/L - 8 d.

Toxicity to microorganisms: Toxicity Threshold - *Pseudomonas putida* - 1 550 mg/L - 16 h.

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

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

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.)

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.)

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.)

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.)

Environmental hazards

ADR/RID: No

IMDG: No

IATA: No

Special precautions for user

no data available

Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

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

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)

Not Listed.

PICCS

Listed.

Vietnam National Chemical Inventory

Listed.

IECSC

Listed.

Korea Existing Chemicals List (KECL)

Listed.

SECTION 16: Other information

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?>

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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/>

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