

Chemical Safety Data Sheet MSDS / SDS

Potassium dihydrogenarsenate SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: Potassium dihydrogenarsenate

CAS: 7784-41-0

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.in

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

Acute toxicity - Category 3, Oral

Acute toxicity - Category 3, Inhalation

Carcinogenicity, Category 1A

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

Hazard statement(s)

H301 Toxic if swallowed

H331 Toxic if inhaled

H350 May cause cancer

H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

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.

P271 Use only outdoors or in a well-ventilated area.

P203 Obtain, read and follow all safety instructions before use.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P273 Avoid release to the environment.

Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.

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

P330 Rinse mouth.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately.

P318 IF exposed or concerned, get medical advice.

P391 Collect spillage.

Storage

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

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 which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name: Potassium dihydrogenarsenate

Common names and synonyms: Potassium dihydrogenarsenate

CAS number: 7784-41-0

EC number: 232-065-8

Concentration: 100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap. Seek medical attention if you feel unwell.

Following eye contact

Rinse with plenty of water for several minutes (remove contact lenses if easily possible). Refer for medical attention.

Following ingestion

Rinse mouth. Refer immediately for medical attention.

Most important symptoms/effects, acute and delayed

Dust may irritate eyes. Ingestion or severe exposure by inhalation can cause burning of throat and mouth, abdominal pain, vomiting, diarrhea with hemorrhage, dehydration, jaundice, and collapse. (USCG, 1999)

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

no data available

SECTION 5: Firefighting measures

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). Use water in flooding quantities as fog. Use "alcohol" foam, dry chemical or carbon dioxide. Potassium arsenate, solid

Specific hazards arising from the chemical

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Containers may explode when heated. Runoff may pollute waterways. (ERG, 2016)

Special protective actions for fire-fighters

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

SECTION 6: Accidental release measures

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. Vacuum with specialist equipment (See Notes) or carefully sweep into containers. Carefully collect remainder. Then store and dispose of according to local regulations.

Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Vacuum with specialist equipment (See Notes) or carefully sweep into containers. Carefully collect remainder. Then store and dispose of according to local regulations.

Methods and materials for containment and cleaning up

Stay upwind. Use water spray to "knock down" dust /contain runoff/. Isolate and remove discharged material. Notify local health and control agencies.

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

Provision to contain effluent from fire extinguishing. Separated from acids and food and feedstuffs. Well closed. Dry. Do NOT store or transport in containers made from metal. Store in an area without drain or sewer access. Protect container against physical damage. Store in well ventilated area away from food or food products and combustible materials. Inorganic arsenic compd

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

TLV: (as As): 0.01 mg/m³, as TWA; A1 (confirmed human carcinogen); BEI issued. MAK: skin absorption (H); carcinogen category: 1; germ cell mutagen group: 3A

Biological limit values

no data available

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.

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

Eye/face protection

Wear face shield or eye protection in combination with breathing protection.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use closed system, ventilation or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Potassium arsenate is a colorless crystalline solid. Soluble in water and denser than water. Toxic by ingestion and inhalation. An irritant.
Colour:	Colorless crystals or white, crystalline mass or powder
Odour:	Odorless
Melting point/freezing point:	288° C
Boiling point or initial boiling point and boiling range:	no data available
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:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	Sol in 5.5 parts cold water. Very soluble in hot water.
Partition coefficient n-octanol/water:	no data available
Vapour pressure:	no data available
Density and/or relative density:	2.867
Relative vapour density:	no data available
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

5 mg/cu m (as AS); NIOSH considers arsenic (inorganic compd, as As) to be a potential occupational carcinogen. Arsenic (inorganic compd, as As)

Decomposes on heating. This produces toxic and corrosive fumes. Reacts with acids. This produces toxic arsine gas (see ICSC 0222). Attacks many metals such as iron, aluminium and zinc in the presence of water. This produces toxic fumes of arsenic (see ICSC 0013) and arsine gas (see ICSC 0222).

Chemical stability

no data available

Possibility of hazardous reactions

Not flammableSalts, basic, such as POTASSIUM ARSENATE, are generally soluble in water. The resulting solutions contain moderate concentrations of hydroxide ions and have pHs 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 strong bases and the neutralization of amines.

Conditions to avoid

no data available

Incompatible materials

No reactivity with water

Hazardous decomposition products

When heated to decomposition it emits toxic fumes of arsenic.

SECTION 11: Toxicological information**Acute toxicity**

Oral: LD50 Rat oral 14.0 mg/kg

Inhalation: no data available

Dermal: no data available

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

Classification of carcinogenicity: 1) evidence in humans: sufficient; 2) evidence in animals: limited. Overall summary evaluation of carcinogenic risk to humans is Group 1: Carcinogenic to humans. NOTE: This evaluation applies to the group of chemicals as a whole and not necessarily to all individual chemicals within the group. Arsenic and arsenic compounds

Reproductive toxicity

no data available

STOT-single exposure

The substance is irritating to the eyes and respiratory tract. Ingestion could cause effects on the gastrointestinal tract. This may result in severe gastroenteritis, loss of fluids and electrolytes, cardiac disorders and shock. Exposure far above the OEL could cause death. The effects may be delayed. Medical observation is indicated.

STOT-repeated exposure

The substance may have effects on the skin, mucous membranes, peripheral nervous system, bone marrow and liver. This may result in pigmentation disorders, hyperkeratosis, perforation of the nasal septum, neuropathy, anaemia and liver impairment. This substance is carcinogenic to humans. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

Aspiration hazard

A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

None

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: UN1677 (For reference only, please check.)

IMDG: UN1677 (For reference only, please check.)

IATA: UN1677 (For reference only, please check.)

UN Proper Shipping Name

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

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

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

Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

Packing group, if applicable

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

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

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

Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

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

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Not Listed.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Not Listed.

IECSC)

Not 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?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

NEVER use a domestic-type vacuum cleaner to vacuum the substance, only use specialist equipment. Depending on the degree of exposure, periodic medical examination is suggested. Do NOT take working clothes home.

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