

PRMI

# MATERIAL SAFETY DATA SHEET

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## SECTION 1 Product Identification

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**CHEMICAL NAME: POTASSIUM DIHYDROGEN ARSENATE**

**PRODUCT NUMBER: 2903**

**CAS#: 7784-41-0**

**FORMULA: KH<sub>2</sub>AsO<sub>4</sub>**

**EINECS NO: 232-065-8**

**SYNONYMS:** Potassium Arsenate monobasic, Arsenic Acid, monopotassium salt,  
Potassium hydrogen arsenate, Potassium acid arsenate, Macquers' salt

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## SECTION 2 Composition and Information on Ingredients

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| INGREDIENT:    | CAS#      | %   | ACGIH (TWA)                 | OSHA (PEL)                  |
|----------------|-----------|-----|-----------------------------|-----------------------------|
| Title Compound | 7784-41-0 | 100 | 0.01 mg (As)/m <sup>3</sup> | 0.01 mg (As)/m <sup>3</sup> |

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## SECTION 3 Hazards Identification

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**EMERGENCY OVERVIEW: DANGER! HIGHLY TOXIC Harmful dust.** Confirmed human carcinogen.  
Irritating to skin, eyes, mucous membranes. Possible teratogen.

**PRIMARY ROUTES OF EXPOSURE:** Inhalation, Ingestion, Skin absorption, Target organ effect.

**EYE CONTACT:** Can cause irritation, burns, red and watery eyes.

**SKIN CONTACT:** Causes irritation to skin, burns, itching and a rash.

**INHALATION:** Highly toxic by inhalation. Causes irritation to respiratory system.

**INGESTION:** May be fatal if swallowed. Highly toxic

**SUBACUTE TOXICITY:** Repeated skin contact can cause thickened skin and/or patchy areas of darkening and loss of pigment.  
Long-term exposure by inhalation can cause an ulcer in the nose. Can cause poor appetite, nausea, vomiting and muscle cramps. Repeated exposure can cause nervous system damage and may affect the liver.

**CHRONIC EXPOSURE: CARCINOGEN Cause cancer to skin, bladder, liver and lung cancers. Potential teratogen. Long term exposure can cause an ulcer in the bone dividing the inner nose. Hoarseness and sore eyes also occur. Repeated exposure can cause nervous system damage with "pins and needles", burning, numbness and weakness of the arms and legs. May also effect the liver.**

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## SECTION 4 First Aid Measures

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**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water (lukewarm if possible) for several minutes. Assure rinsing under eyelids. Consult a physician immediately.

**SKIN EXPOSURE:** Wash affected area with large amounts soap and water. Rinse skin thoroughly. Remove contaminated clothes if necessary. Seek immediate medical advice if redness, itching, burns, develop/persist.

**INHALATION:** Remove victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance. Give oxygen if deemed necessary. If not breathing administer CPR. Get emergency care immediately.

**INGESTION:** Seek competent medical assistance immediately. Keep the victim calm. Do not induce vomiting.

## SECTION 5

### Firefighting Measures

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**FLASH POINT:** Not applicable

**AUTOIGNITION TEMPERATURE:** Not applicable

**EXPLOSION LIMITS:** See Unusual fire hazards section below.

**EXTINGUISHING MEDIUM:** Agent suitable for surrounding fire.

**SPECIAL FIREFIGHTING PROCEDURES:** If this product is involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** If involved in a fire this material may emit highly toxic fumes of arsenic trioxide.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** Containers may explode in fire.

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## SECTION 6

### Accidental Release Measures

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**SPILL AND LEAD PROCEDURES:** Isolate spillage. Evacuate unprotected persons. Use adequate protection when handling to avoid inhalation and contact with material. Absorb spill with inert materials, then place in well-marked applicable chemical waste container. Ensure adequate ventilation.

**DISPOSAL:** Retain all contaminated solage for removal and treatment. Dispose of in accordance with all waste disposal regulations. Do not allow material into the environment.

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## SECTION 7

### Handling and Storage

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**HANDLING AND STORAGE:** Keep container tightly closed. Store in a dry, well-ventilated area. Store away from strong acids, strong oxidizing agents. *Highly Toxic. Harmful Dust.* Do not breathe dust. Avoid contact with eyes, skin, on clothing or shoes. A regulated, marked area should be established when handled, used or stored as required by the OSHA standard: 29CFR 1910.1018. To be used and handled by qualified personnel only.

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## SECTION 8

### Exposure Controls and Personal Protection

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**EYE PROTECTION:** Always wear approved safety glasses w/side shields, or safety goggles, faceshield when handling a chemicals substance in the laboratory.

**SKIN PROTECTION:** Chemical resistant, impervious

**VENTILATION:** Handle in an efficient chemical fume hood.

**RESPIRATOR:** If ventilation if not available, a high efficiency dust respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29CFR 1910.34.

**ADDITIONAL PROTECTION:** Protection to avoid contact with clothing, shoes.( chemical-resistant lab apron, overalls, booties, sleevelets.)

**OTHER PROTECTIVE EQUIPMENT:** Eye wash and quick-drench shower facilities should be available in work area. Use in a contolled environment. Do not smoke, eat or drink in area. Avoid prolonged or repeated exposure. Do not wear shoes or clothing exposed to material home.

**PRECAUTIONS:** **HIGHLY TOXIC HUMAN CARCINOGEN.** Avoid contact with skin, eyes, clothing, shoes. Irritant to skin and mucous membranes. Do not inhale dust. Use with adequate ventilation. May be fatal if swallowed. May be absorbed thru skin. Harmful if inhaled. Avoid release into the environment. To be used by qualified individuals only with the proper training to handle this material.

## SECTION 9

## Physical and Chemical Properties

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**COLOR AND FORM:** White or colorless white crystals or powder

**MOLECULAR WEIGHT:** 180.034

**MELTING POINT (DEG. C.):** 277-283

**SPECIFIC GRAVITY (WATER = 1):** 1.880 g/cm<sup>3</sup>

**BOILING POINT:** No Data

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY (AIR = 1):** Not applicable

**% VOLATILE BY VOLUME:** Non volatile

**SOLUBILITY IN WATER:** Highly soluble in hot water; slightly soluble in cold water. ; g/100 ml at 6 deg. C. : 19

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## SECTION 10 Stability and Reactivity

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**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Attacks many metals in presence of water such as iron, aluminum, potassium and zinc, releasing toxic fumes of arsine gas.

**INCOMPATIBILITY:** Strong acids, Strong oxidizing agents.

**DECOMPOSITION PRODUCTS:** Fumes of toxic arsenic trioxide, potassium oxides.

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## SECTION 11 Toxicological Information

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**CARCINOGENIC EFFECTS:** Yes

**MUTAGENIC EFFECTS:** No Data

**TETRAOGENIC EFFECTS:** Suspected.

**TARGET ORGANS:** Skin, Liver, Kidneys, Bladder, Lungs, Gastrointestinal tract.

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.  
Not for drug, household or other uses.

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## SECTION 12 Ecological Information

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**ECOLOGICAL INFORMATION:** This substance may be hazardous in the environment; special attention should be given to ground water contamination, aquatic organisms and soil organisms. Great care should be given to avoid any release, e.g. through inappropriate disposal.

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## SECTION 13 Disposal Considerations

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**DISPOSAL:** Dispose of in according to local, state and federal regulations.

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**SECTION 14      Transportation Information**

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Proper Shipping Name: Potassium arsenate  
Class 6.1 UN1677, PG II TOXIC LABEL    DOT AND IATA REGULATED

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**SECTION 15      Regulatory Information**

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**TSCA:** Listed on TSCA Inventory  
**OSHA:** Regulated  
**SARA (TITLE 313):** Subject to SARA Section 313 reporting requirements.  
**RCRA STATUS:** Meets criteria for toxic material and should be managed as a hazardous waste .  
**RTECS#:** CG1100000

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**SECTION 16      Other Information**

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**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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