

Section 1 Chemical Product and Company Information

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CHEMTREC 24 Hour Emergency
Phone Number (800) 424-9300
For laboratory use only.
Not for drug, food or household use.

Product POTASSIUM DICHROMATE

Synonyms Potassium Bichromate

Section 2 Hazards Identification

Signal word: DANGER

Pictograms: GHS06 / GHS09 / GHS05 / GHS08 / GHS03

Target organs: Kidneys, Liver, Blood



GHS Classification:

Ox. Sol. (Category 2) Acute tox. (Category 3*)
Acute tox. (Category 2*) Resp. Sens. (Category 1)
Acute tox. (Category 4*) Skin Corr. (Category 1B)
Skin Sens. (Category 1) Muta. (Category 1B)
Carc. (Category 1B) Repr. (Category 1B)
STOT - RE (Category 1) Aquatic Acute (Category 1)
Aquatic Chronic (Category 1)

GHS Label information: Hazard statement:

H272: May intensify fire; oxidizer.
H301: Toxic if swallowed.
H330: Fatal if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H312: Harmful in contact with skin.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H340: May cause genetic defects.
H350: May cause cancer.
H360FD: May damage fertility. May damage the unborn child.
H372*: Causes damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
Ca Prop 65: This chemical is known to the State of California to cause cancer or reproductive toxicity.

Precautionary statement:

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220: Keep away from clothing/incompatible/combustible materials.
P221: Take any precaution to avoid mixing with combustibles and incompatible materials.
P260: Do not breathe dust.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P284: Wear respiratory protection.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310: Immediately call a POISON CENTER or doctor.
P302+P352: IF ON SKIN: Wash with plenty of water and soap.
P312: Call a POISON CENTER or doctor if you feel unwell.
P362+P364: Take off contaminated clothing and wash it before reuse.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310: Immediately call a POISON CENTER or doctor.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P370+P378: In case of fire: Use water to extinguish.
P391: Collect spillage.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Potassium dichromate	7778-50-9	100%	231-906-6

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. Can cause severe tissue destruction. Kidney failure may follow and result in death.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. May cause irritation of nasal septum and respiratory tract. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. Contact causes severe irritation and potential permanent damage to the eyes. Exposure to low level concentrations may cause moderate irritation and/or conjunctivitis.

SKIN ABSORPTION: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Massive overexposure to solutions could lead to kidney failure and death.

Note to physician: Massive overexposure to solutions of potassium dichromate can lead to kidney failure and death. Death has been avoided in several such cases through the use of early renal dialysis. Skin ulcerations may be treated by removal from exposure, daily cleansing and debridement, and application of antibiotic cream and dressing to prevent further exposure or contamination.

Section 5 Fire Fighting Measures

Extinguishing Media: Use water. Do not use dry chemicals or foams. CO₂ or Halon® may provide limited control.

General information: In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool. Although not flammable, this chemical may intensify fire when in contact with combustible materials. Water runoff may contain chromium compounds and should not be allowed to enter sewers or waterways. May emit toxic fumes under fire conditions.

Section 6 Accidental Release Measures

Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation. Recover for use if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water. Avoid runoff into storm sewers and ditches which lead to waterways.

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale dusts. Wash thoroughly after handling. Remove and wash clothing before reuse.

Storage: Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
* as water soluble Cr(VI) inorganic compounds	Potassium dichromate	TWA: 0.05 mg/m ³ (A1)*	TWA: 0.005 mg/m ³ *	TWA: 0.001 mg/m ³ *

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Appearance: Orange-red crystals. Odor: No odor. Odor threshold: N/A pH: N/A Melting / Freezing point: 398°C (748°F) Boiling point: N/A Flash point: Not flammable. Evaporation rate (= 1): N/A	Flammability (solid/gas): N/A Explosion limits: Upper: N/A Lower: N/A Vapor pressure (mm Hg): N/A Vapor density (Air = 1): N/A Relative density (Specific gravity): 2.67 Solubility(ies): Appreciable in water (>10%) Partition coefficient: (n-octanol / water): log Pow: 5 Auto-ignition temperature: N/A	Decomposition temperature: N/A Viscosity: N/A Molecular formula: K ₂ Cr ₂ O ₇ Molecular weight: 294.19
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Section 10 Stability & Reactivity

Chemical stability: Stable

Hazardous polymerization: Will not occur.

Conditions to avoid: Excessive temperatures and heat. Stable under recommended storage conditions.

Incompatibilities with other materials: Organic materials, powdered metals, hydrazine. Do not store near acids.

Hazardous decomposition products: Potassium oxides, chromium oxides.

Section 11 Toxicological Information

NTP: Listed.

IARC: Listed.*

OSHA: Listed.**

Ca Prop 65: Listed.

Effects of overexposure: Risk of cancer depends on level and duration of exposure. Chromium compounds in the form of chromates and dichromates have been found to be mutagenic in bacterial and mammalian cells, including those of the Chinese hamster. Recent studies indicate a significant risk of lung cancer among long-term employees of the chromate producing industry. **INHALATION:** May cause irritation of nasal septum and respiratory tract. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum. **SKIN:** Contact with broken skin may lead to formation of firmly marginated "chrome sores". **EYES:** Overexposure will cause severe irritation and potential permanent damage to the eyes. Low level concentrations may cause moderate irritation or conjunctivitis. **INGESTION:** Can cause severe tissue destruction, kidneys failure and death. Exercise appropriate procedures to minimize potential hazards.

RTECS #: HX7680000

Oral-Rat LD50: 57 mg/kg; Dermal-Rabbit LD50: 1.17 g/kg; Inhalation-Rat LD50: 94 mg/m³

* Listed as Chromium(VI) compound, Group 1 (Carcinogenic to humans)

** Listed as Chromium(VI) compound

Section 12 Ecological Information

Toxicity to fish: LC50 - Lepomis macrochirus - 0.131 mg/l - 96.0 h / mortality NOEC - Pimephales promelas (fathead minnow) - 6 mg/l - 7.0 d

Toxicity to daphnia and other aquatic invertebrates: mortality NOEC - Daphnia - 0.016 - 0.064 mg/l - 7 d / EC50 - Daphnia magna (Water flea) - 0.035 mg/l - 48 h

Toxicity to algae: EC50 - Pseudokirchneriella subcapitata - 0.31 mg/l - 72 h

Persistence and degradability: No data available

Bioaccumulative potential: Oncorhynchus mykiss (rainbow trout) - 180 d / Bioconcentration factor (BCF): 17.4

Mobility in soil: No data available

PBT and vPvB assessment: No data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information (US DOT / CANADA TDG)

UN/NA number: UN3086

Shipping name: Toxic solids, oxidizing, n.o.s., (Potassium dichromate)

Hazard class: 6.1, (5.1)

Packing group: I

Reportable Quantity: 4.54 Kg (10 Lbs)

Marine pollutant: No

Exceptions: No exceptions

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Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Potassium dichromate	Listed	10 lbs.	Not listed	Listed	Not listed	C; D1A; D2A; D2B

**Section 16 Additional Information**

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.