

Section 1 Chemical Product and Company Identification

Page E1 of E2



5100 West Henrietta Rd
PO Box 92912
Rochester, NY 14692-9012
Tel: (800) 962-2660

Boreal Science
399 Vansickle Road
St. Catharines, Ontario
L2S 3T4 Canada
Tel: (800) 387-9393

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

Product	POTASSIUM DICHROMATE
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Synonyms	Potassium Bichromate
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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.

Hazards not otherwise classified:

Health hazards not otherwise classified (HHNOC) - Not Known

Physical hazards not otherwise classified (PHNOC) - Not Known

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: TOXIC IF SWALLOWED. 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.

INHALATION: FATAL IF INHALED. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: CAUSES EYE DAMAGE. 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.

SKIN ABSORPTION: HARMFUL IN CONTACT WITH SKIN. CAUSES SEVERE SKIN BURNS. MAY CAUSE AN ALLERGIC SKIN REACTION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

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

Protective Actions for Fire-fighters: 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.

Specific Hazards: During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. 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

Personal Precautions: Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

Environmental Precautions: Avoid runoff into storm sewers and ditches which lead to waterways.

Containment and Cleanup: Recover for reuse if not contaminated. Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

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

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

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

Skin corrosion/irritation: Skin-rabbit - Severe irritant.

Serious eye damage/irritation: Eyes-rabbit - Severe irritant.

Respiratory or skin sensitization: Data not available

Germ cell mutagenicity: Data not available

Carcinogenicity: Data not available

NTP: Known to be a human carcinogen.

IARC classified: Group 1: Carcinogenic to humans (Chromium(VI) compound).

OSHA: This product contains a chemical known to cause cancer (Chromium(VI) compound).

CA Prop 65: ⚠️ WARNING! : This product can expose you a chemical, Chromium [hexavalent compounds], which is known to the State of California to cause cancer and reproductive harm.

Reproductive toxicity: Data not available

STOT-single exposure: Data not available

STOT-repeated exposure: Data not available

Aspiration hazard: Data not available

Potential health effects:

Inhalation: May cause irritation of nasal septum and respiratory tract. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.

Ingestion: Can cause severe tissue destruction, kidneys failure and death.

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.

Signs and symptoms of exposure: 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. Exercise appropriate procedures to minimize potential hazards.

Additional information: RTECS #: HX7680000

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

2016 ERG Guide # 141

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	CERLCA (RQ)	RCRA code	DSL	NDSL	CA Prop 65
Potassium dichromate	Listed	10 lbs.	Not listed	Listed	Not listed	⚠️ WARNING -Cancer and Reproductive Harm - www.P65Warnings.ca.gov.

Section 16 Other 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.