

Material Safety Data Sheet

Potassium chromate

ACC# 19320

Section 1 - Chemical Product and Company Identification

MSDS Name: Potassium chromate**Catalog Numbers:** AC202340000, AC202340050, AC202345000, P220-100, P220-3, P220-500, S71231**Synonyms:** Chromic acid, dipotassium salt; Chromate of potassium; Neutral potassium chromate.**Company Identification:**

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7789-00-6	Chromic acid dipotassium salt	>99.5	232-140-5

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: yellow solid.

Danger! Strong oxidizer. Contact with other material may cause a fire. Causes eye, skin, and respiratory tract irritation. Harmful if inhaled or swallowed. May cause allergic skin reaction. Cancer hazard. May be harmful if absorbed through the skin.

Target Organs: Kidneys, liver, respiratory system, eyes, skin.

Potential Health Effects

Eye: Contact with eyes may cause severe irritation, and possible eye burns. Exposure to particulates or solution may cause conjunctivitis, ulceration, and corneal abnormalities.

Skin: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Contact with skin causes irritation and possible burns, especially if the skin is wet or moist. May cause dermatitis.

Ingestion: May cause severe and permanent damage to the digestive tract. May cause liver and kidney damage. May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea.

Inhalation: May cause asthmatic attacks due to allergic sensitization of the respiratory tract. May cause ulceration and perforation of the nasal septum if inhaled in excessive quantities. May cause severe

irritation of the upper respiratory tract with pain, burns, and inflammation. Causes chemical burns to the respiratory tract. May cause chemical bronchitis with coughing and difficulty in breathing.

Chronic: Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Prolonged or repeated exposure may lead to asthma and perforation of the nasal septum. Repeated inhalation may cause chronic bronchitis. May cause liver and kidney damage. May cause cancer in humans.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid immediately. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Containers may explode in the heat of a fire. Runoff from fire control or dilution water may cause pollution.

Extinguishing Media: Do NOT use dry chemicals, CO₂, Halon or foams. Use water only in flooding quantities as fog.

Flash Point: Not available.

Autoignition Temperature: None reported.

Explosion Limits, Lower: None reported.

Upper: None reported.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0; Special Hazard: OX

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Keep combustibles (wood, paper, oil, etc.,) away from spilled material.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not ingest or inhale. Use with adequate ventilation. Discard contaminated shoes.

Storage: Do not store near combustible materials. Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed. Avoid storage on wood floors.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Chromic acid dipotassium salt	0.05 mg/m ³ TWA (as Cr) (listed under Chromium (VI) compounds- water soluble).	0.001 mg/m ³ TWA (as Cr) (listed under Chromates).15 mg/m ³ IDLH (as Cr(VI)) (listed under Chromates).	5 æg/m ³ TWA (listed under Chromium (VI) compounds).0.1 mg/m ³ Ceiling (as CrO ₃ , applies to any operations or sectors for which the H exavalent Chromium standard [29 CFR 1910.1026] is stayed or is othe rwise not in effect) (listed under Chromates).2.5 æg/m ³ Action Level (as Cr.); 5 æg/m ³ TWA (as Cr, Cancer hazard - see 29 CFR 1910.1026) (listed under Chromium (VI) compounds).

OSHA Vacated PELs: Chromic acid dipotassium salt: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: yellow

Odor: odorless

pH: 8.6-9.8 (5% soln)
Vapor Pressure: 0
Vapor Density: Not applicable.
Evaporation Rate: Not applicable.
Viscosity: Not applicable.
Boiling Point: Not available.
Freezing/Melting Point: 975 deg C
Decomposition Temperature: Not available.
Solubility: Soluble.
Specific Gravity/Density: 2.7320
Molecular Formula: K₂CrO₄
Molecular Weight: 194.20

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Dust generation.
Incompatibilities with Other Materials: Hydrazine, combustible, organic, or other readily oxidizable materials: paper, wood, sulfur, aluminum, plastics, chromic acid, chromates.
Hazardous Decomposition Products: Oxides of potassium, toxic chromium oxide fumes.
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 7789-00-6: GB2940000

LD50/LC50:

CAS# 7789-00-6:

Oral, mouse: LD50 = 180 mg/kg;

Carcinogenicity:

CAS# 7789-00-6:

- **ACGIH:** A1 - Confirmed Human Carcinogen (listed as 'Chromium (VI) compounds- water soluble').
- **California:** carcinogen, initial date 2/27/87 (listed as Chromium (VI) compounds).
- **NTP:** Known carcinogen (listed as Chromium (VI) compounds).
- **IARC:** Group 1 carcinogen

Epidemiology: Certain hexavalent chromium compounds have been demonstrated to be carcinogenic on the basis of epidemiological investigations on workers and experimental studies in animals. There is an increased incidence of lung cancer in industrial workers exposed to chromium (VI) compounds. Please refer to IARC volume 23 for a more detailed discussion.

Teratogenicity: TDLo (Intraperitoneal, mouse) = 30 mg/kg

Reproductive Effects: No information found

Mutagenicity: Mutation in microorganisms (Salmonella typhimurium) = 35 ug/plate
 Mutation in microorganisms (Salmonella typhimurium) = 10 ug/plate

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. LC50 *Physa heterostropha* (snail) 31,600 ug/l as chromium; water hardness as 171 mg/l as calcium carbonate; static unmeasured method LC50 *Daphnia magna* (Cladoceran) 137,66.7 and 15.3 ug/l as chromium; water hardnesses of 212,188 and 50 as calcium carbonate, respectively, and with pH values of 8.2 to 8.4, 7.5 to 7.5 to 7.6, and 7.5, respectively; static measured method.

Environmental: Aquatic Fate: Cr(VI) exists in solution as hydrochromate, chromate, and dichromate ionic species. The proportion of each ion in solution is dependent on pH. In strongly basic and neutral pHs, the chromate form predominates. Chromium is present usually as Cr(III) in the soil and is characterized by its lack of mobility, except in cases where Cr(VI) is involved. Chromium (VI) of natural origin is rarely found.

Physical: As the pH is lowered, the hydrochromate concentration increases. At very low pHs, the dichromate species predominates. In the pH ranges encountered in natural water, the predominant forms are hydrochromate ions (63.6%) at pH 6.0 to 6.2 and chromate ion (95.7%) at pH 7.8 to 8.5. The oxidizing ability of Cr(VI) in aqueous solution is pH dependent.

Other: No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	OXIDIZING SOLID, TOXIC, N.O.S.	Oxidizing Solid, Toxic, N.O.S. (POTASSIUM CHROMATE)
Hazard Class:	5.1	5.1
UN Number:	UN3087	UN3087
Packing Group:	III	III

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 7789-00-6 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

CAS# 7789-00-6: Section 6, 0.1 % de minimus concentration [see 40 CFR 749.68]

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 7789-00-6: 10 lb final RQ; 4.54 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 7789-00-6: immediate, delayed.

Section 313

This material contains Chromic acid dipotassium salt (listed as Chromium (VI) compounds), >99.5%, (CAS# 7789-00-6) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 7789-00-6 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7789-00-6 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, (listed as Chromium (VI) compounds- water soluble), Minnesota, (listed as Chromium (VI) compounds), Massachusetts.

California Prop 65**The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:**

WARNING: This product contains Chromic acid dipotassium salt, listed as 'Chromium (VI) compounds', a chemical known to the state of California to cause cancer.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations**European Labeling in Accordance with EC Directives****Hazard Symbols:**

T O N

Risk Phrases:

R 22 Harmful if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

R 43 May cause sensitization by skin contact.

R 46 May cause heritable genetic damage.

R 8 Contact with combustible material may cause fire.

R 49 May cause cancer by inhalation.

R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety Phrases:

- S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
- S 53 Avoid exposure - obtain special instructions before use.
- S 60 This material and its container must be disposed of as hazardous waste.
- S 61 Avoid release to the environment. Refer to special instructions /safety data sheets.

WGK (Water Danger/Protection)

CAS# 7789-00-6: 2

Canada - DSL/NDSL

CAS# 7789-00-6 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of C, D2A, D1B, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 7789-00-6 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information
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MSDS Creation Date: 2/24/1999

Revision #8 Date: 11/20/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.