ISO9001:2000 Certified

Material Safety Data Sheet
Potassium Chromate

Section 1 - Chemical Product and Company Identification

MSDS Name:
Potassium Chromate
Catalog Numbers:
LC18830
Synonyms:

Company Identification:
LabChem, Inc.
200 William Pitt Way
Pittsburgh, PA 15238
Company Phone Number:
(412) 826-5230
Emergency Phone Number:
(800) 424-9300
CHEMTREC Phone Number:
(800) 424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7789-00-6	Potassium chromate	100

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Yellow crystals.*

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: *Kidney, liver, eyes, skin, respiratory system.*

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:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once. This may be followed with repeated irrigation using normal saline solution (about 0.85%).

Skin:
Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:
Get medical aid at once. Give oxygen if respiration is depressed. If victim is conscious, give 2-4 glasses of water to dilute alkali.

Inhalation:
Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

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.

Autoignition Temperature:
No information found.

Flash Point:
No information found.

NFPA Rating:
CAS# 7789-00-6: H- 2; F- 0; I-0; OX.

Explosion Limits:
Lower: n/a Upper: n/a

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
Potassium chromate	0.05 mg/m3 TWA (as Cr) (listed under Chromium (VI) compounds- water soluble).	0.001 mg/m3 TWA (as Cr) (listed under Chromates).15 mg/m3 IDLH (as Cr(VI)) (listed under Chromates).	5 µg/m3 TWA (listed under Chromium (VI) compounds). 0.1 mg/m3 Ceiling (as CrO3) (listed under Chromates). 2.5 µg/m3 Action Level (as Cr.); 5 µg/m3 TWA (as Cr. Cancer hazard - See 29 CFR 1910.1026) (listed under Chromium (VI) compounds).

OSHA Vacated PELs:

Personal Protective Equipment

Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:
Wear appropriate protective gloves to prevent skin exposure.

Clothing:
Wear appropriate protective clothing to prevent skin exposure.

Respirators:
Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode.
5mg/m3 - HiEPF/SAF/SCBAF.
30mg/m3 - PAPHiEPF/SAF:PD,PP,CF.
Escape - HiEP/SCBA. Respirator Codes DHEW (NIOSH) Publication No. 78-210.

Section 9 - Physical and Chemical Properties

Physical State: Crystals
Color: Yellow
Odor: Odorless
pH: 8.6 – 9.8 (5% solution)
Vapor Pressure: No information found.
Vapor Density: No information found.
Evaporation Rate: No information found.
Viscosity: No information found.
Boiling Point: No information found.
Freezing/Melting Point: 975°C
Decomposition Temperature: No information found.
Solubility in water: Soluble.
Specific Gravity/Density: 2.732
Molecular Formula: K_2CrO_4
Molecular Weight: 194.19

Section 10 - Stability and Reactivity

Chemical Stability:
Stable under normal temperatures and pressures.

Conditions to Avoid:
Incompatible materials.

Incompatibilities with Other Materials:
Combustible or readily oxidizable materials.

Hazardous Decomposition Products:
Oxides of potassium, oxides of chromium.

Hazardous Polymerization:
Has not been reported

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 is listed as a carcinogen by ACGIH (A1), IARC (Group 1), NIOSH, NTP, OSHA, or CA Prop 65. (chromium VI compounds.)

Epidemiology:

Potassium chromate is a severe pulmonary, skin, and eye irritant and skin sensitizer. 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.

Teratogenicity:

TDLo: 30mg/kg intraperitoneal - mouse.

Reproductive:

No information found.

Mutagenicity:

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

Neurotoxicity:

No information found.

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 calciium 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.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Oxidizing solid, toxic, nos
Hazard Class: 5.1 (6.1)
UN Number: UN3078
Packing Group: III

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Section 15 - Regulatory Information

US Federal

TSCA:

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

SARA Reportable Quantities (RQ):

CAS# 7789-00-6: final RQ = 10 pounds (4.54 kg)

CERCLA/SARA Section 313:

This material contains Potassium Chlormate (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.

OSHA - Highly Hazardous:

None of the components are on this list.

US State

State Right to Know:

Potassium chromate can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Regulations:

WARNING: This product contains Potassium Chromate, listed as `Chromium (VI) compounds', a chemical known to the state of California to cause cancer.

European/International Regulations

Canadian DSL/NDSL:

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

Canada Ingredient Disclosure List:

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

Section 16 - Other Information

MSDS Creation Date: November 23, 2004
Revision Date: October 8, 2008

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