



## Material Safety Data Sheet Potassium dichromate solutions

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Potassium dichromate solutions

**Catalog Numbers:**

LC18945, LC18947, LC18950, LC18960, LC18980, LC19000, LC19010, LC19020

**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
7732-18-5	Water	balance
7778-50-9	Potassium dichromate	0.12 - 9

### Section 3 - Hazards Identification

#### Emergency Overview

**Appearance:** *Clear, orange solution*

**Danger!** May be fatal if inhaled or swallowed. Strong oxidizer. Contact with other material may cause a fire. Causes burns by all exposure routes. May cause allergic respiratory and skin reaction. May impair fertility. May cause harm to the unborn child. Harmful if absorbed through the skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Cancer hazard. May cause heritable genetic damage. May cause sensitization by inhalation and by skin contact.

**Target Organs:** *Blood, kidneys, liver, lungs, respiratory system, gastrointestinal system, teeth, eyes, skin.*

#### Potential Health Effects

**Eye:**

May cause eye irritation or burns.

**Skin:**

Harmful if absorbed through the skin. Causes skin irritation or burns. May cause skin sensitization.



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**Ingestion:**

May be fatal if swallowed. Causes gastrointestinal tract burns. May cause kidney damage. May cause perforation of the digestive tract.

**Inhalation:**

May be fatal if inhaled. May cause allergic respiratory reaction. May cause liver and kidney damage. May cause ulceration and perforation of the nasal septum if inhaled in excessive quantities.

**Chronic:**

Prolonged or repeated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration. May cause respiratory tract cancer. May cause liver and kidney damage. May cause cancer in humans. Laboratory experiments have resulted in mutagenic effects. Possible risk of harm to the unborn child. Repeated or prolonged exposure may cause erosion and discoloration of the teeth. May impair fertility.

### 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.

**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. If victim is conscious, give 2-4 glasses of water. Do not induce vomiting.

**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. Water runoff can cause environmental damage. Dike and collect water used to fight fire. 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. Use water spray to keep fire-exposed containers cool. Containers may explode if exposed to fire.

**Extinguishing Media:**

Use water only! Do NOT use dry chemical. Do NOT use halocarbons and sodium bicarbonate. Do NOT use carbon dioxide or dry chemical. Contact professional fire-fighters immediately. Cool containers with flooding quantities of water until well after fire is out.

**Autoignition Temperature:**

No information found.

**Flash Point:**

No information found.

**NFPA Rating:**

CAS# 7732-18-5: H-0; F-0; I-0



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CAS# 7778-50-9; H-4; F-0; I-1; 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:**

Provide ventilation. Do not use combustible materials such as paper towels to clean up spill. Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Area may be washed down with water.

### Section 7 - Handling and Storage

**Handling:**

Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid contact with clothing and other combustible materials. Do not ingest or inhale. Use only in a chemical fume hood. Discard contaminated shoes.

**Storage:**

Keep away from heat, sparks, and flame. Do not store near combustible materials. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from reducing agents.

### 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 explosion-proof ventilation to keep airborne levels to acceptable levels.

**Exposure Limits:**

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.



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<b>Potassium dichromate</b>	0.05 mg/m <sup>3</sup> TWA (as Cr) (listed under Chromium (VI) compounds- water soluble).	0.001 mg/m <sup>3</sup> TWA (as Cr) (listed under Chromates).15 mg/m <sup>3</sup> IDLH (as Cr(VI)) (listed under Chromates).	5 æg/m <sup>3</sup> TWA (listed under Chromium (VI) compounds). 0.1 mg/m <sup>3</sup> Ceiling (as CrO <sub>3</sub> , 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 <sup>3</sup> Action Level (as Cr.); 5 æg/m <sup>3</sup> TWA (as Cr. Cancer hazard - See 29 CFR 1910.1026) (listed under Chromium (VI) compounds).
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### 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:

Not required for normal use. Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Clear liquid
<b>Color:</b>	Orange
<b>Odor:</b>	Odorless
<b>pH:</b>	4 (5% solution)
<b>Vapor Pressure:</b>	No information found.
<b>Vapor Density:</b>	No information found.
<b>Evaporation Rate:</b>	No information found.
<b>Viscosity:</b>	No information found.
<b>Boiling Point:</b>	No information found.
<b>Freezing/Melting Point:</b>	No information found.
<b>Decomposition Temperature:</b>	No information found.
<b>Solubility in water:</b>	Soluble.
<b>Specific Gravity/Density:</b>	1.0
<b>Molecular Formula:</b>	No information found.
<b>Molecular Weight:</b>	No information found.



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### Section 10 - Stability and Reactivity

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials, excess heat, combustible materials, organic materials.

**Incompatibilities with Other Materials:**

Reducing agents, acids, strong bases, acetic anhydride, hydrazine, hydroxylamine, nitric acid, oils, hydrochloric acid.

**Hazardous Decomposition Products:**

Oxygen, oxides of potassium, chromium dioxide, toxic chromium oxide fumes.

**Hazardous Polymerization:**

Has not been reported.

### Section 11 - Toxicological Information

**RTECS:**

CAS# 7732-18-5: ZC0110000.

CAS# 7778-50-9: HX7680000.

**LD50/LC50:**

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 7778-50-9:

Draize test, rabbit, eye: 140 mg Severe;

Oral, mouse: LD50 = 190 mg/kg;

Oral, rat: LD50 = 25 mg/kg;

Skin, rabbit: LD50 = 14 mg/kg;

Inhalation, rat: LC50 = 0.094 mg/l/4H (Merck).

**Carcinogenicity:**

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7778-50-9:

**ACGIH:** A1 – Confirmed Human Carcinogen (listed as ‘Chromium (VI) compounds – water solutions).

**California:** Carcinogen, initial date 2/27/87 (listed as Chromium (VI) compounds).

**NIOSH:** Potential occupational carcinogen (listed as Chromium (VI) compounds).

**NTP:** Known carcinogen (listed as Chromium (VI) compounds).

**OSHA:** Select carcinogen (listed as Chromium (VI) compounds).

**IARC:** IARC Group 3 – not classifiable (listed as Chromium).

**Epidemiology:**

Certain hexavalent chromium compounds have been demonstrated to be carcinogenic on the basis of epidemiological investigations on workers and experimental studies in animals.

**Teratogenicity:**

Oral, rat: TDLo = 1 gm/kg (female 0-19 day(s) after conception) Specific Developmental Abnormalities - musculoskeletal system.; Oral, mouse: TDLo = 1 gm/kg (female 20 day(s) pre-mating) Effects on Embryo or Fetus - extra-embryonic structures (e.g., placenta, umbilical cord) and Effects on Embryo or Fetus - fetotoxicity (except death, e.g., stunted fetus).



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### Reproductive:

Oral, rat: TDLo = 525 mg/kg (female 21 day(s) after conception) Fertility - pre-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea) and Fertility - post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants).

### Mutagenicity:

Micronucleus Test: Human, Lymphocyte = 300 ug/L.; Morphological Transformation: Human, Fibroblast = 200 nmol/L.; DNA Damage: Human, Fibroblast = 500 nmol/L.; Unscheduled DNA Synthesis: Human, Fibroblast = 50 umol/L.; DNA Inhibition: Human, Fibroblast = 100 umol/L.; DNA Inhibition: Human, HeLa cell = 13 umol/L.; Mutation Test Systems - not otherwise specified: Human, Fibroblast = 100 umol/L.

### Neurotoxicity:

No information available.

## Section 12 - Ecological Information

### Ecotoxicity:

Fish: Striped bass: LC50 = 75 mg/L; 96 Hr; Static bioassay Fish: Fathead Minnow: LC50 = 17,300 ug/L; Unspecified; as chromium (Unspecified) Fish: Bluegill/Sunfish: LC50 = 118,000 – 133,000 ug/L; Unspecified; as chromium (Static unmeasured) Water flea Daphnia: EC50 = 1,570 ug/L; 24Hr; as chromium (Unspecified) Chromium probably occurs as the insoluble Cr(III) oxide (Cr<sub>2</sub>O<sub>3</sub>.nH<sub>2</sub>O) in soil, as the organic matter in soil is expected to reduce any soluble chromate to insoluble chromic oxide (Cr<sub>2</sub>O<sub>3</sub>). Chromium in soil can be transported to the atmosphere by way of aerosol formation. Chromium is also transported from soil through runoff and leaching of water

### Environmental:

Most of the chromium in surface waters may be present in particulate form as sediment. Some of the particulate chromium would remain as suspended matter and ultimately be deposited in sediments. Chromium is present usually as Cr(III) in the soil and is characterized by its lack of mobility, except in case where Cr(VI) is involved. Chromium (VI) of natural origin is rarely found.

### Physical:

No information available.

### Other:

Dangerous to aquatic life in high concentrations.

## Section 13 - Disposal Considerations

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

## Section 14 - Transport Information

<b>US DOT</b>	<b>9%</b>	<b>&lt;9%</b>
<b>Shipping Name:</b>	Toxic liquid, oxidizing, nos	Not regulated.
<b>Hazard Class:</b>	6.1	
<b>UN Number:</b>	UN3122	
<b>Packing Group:</b>	PGII	



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### Section 15 - Regulatory Information

#### US Federal

##### TSCA:

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 7778-50-9 is listed on the TSCA Inventory.

##### SARA Reportable Quantities (RQ):

CAS# 7778-50-9: final RQ = 10 pounds (4.54 kg)

##### CERCLA/SARA Section 313:

This material contains Potassium dichromate (listed as Chromium (VI) compounds), 100%, (CAS# 7778-50-9) 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 dichromate can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

##### California Regulations:

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

#### European/International Regulations

##### Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 7778-50-9 is listed on Canada's DSL List.

##### Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7778-50-9 is listed on Canada's Ingredient Disclosure List.

### Section 16 - Other Information

MSDS Creation Date: January 31, 1999

Revision Date: September 9, 2008

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