



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name POTASSIUM DICHROMATE, CERTIFIED
Catalog # 78
Version # 02
Revision date 27-Aug-2009
CAS # 7778-50-9
Synonym(s) POTASSIUM BICHROMATE
Manufacturer information GFS Chemicals, Inc.
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Fax 740-881-5989
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Emergency Assistance Chemtrec 800-424-8300

2. Hazards Identification

Emergency overview DANGER
May be fatal if swallowed. Toxic in contact with skin. Exposure to powder or dusts may be irritating to eyes, nose and throat. MAY CAUSE CANCER.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.

Eyes Toxic in contact with eyes. Dust or powder may irritate eye tissue.

Skin Toxic in contact with skin.

Inhalation May cause destruction of mucous membranes. Inhalation of dusts may cause respiratory irritation.

Ingestion Very toxic if swallowed. Do not ingest.

Potential environmental effects Components of this product are hazardous to aquatic life. May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
POTASSIUM DICHROMATE	7778-50-9	90 - 100

Composition comments

US OSHA Table Z-1-A: Ceiling Limit Value (mg/m3)

POTASSIUM DICHROMATE 7778-50-9 MGM3 - 0.1

US OSHA Table Z-2: Ceiling Limit Value

POTASSIUM DICHROMATE 7778-50-9 0.1 MGM3

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin contact Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Inhalation If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.

Ingestion

Have victim rinse mouth thoroughly with water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting without advice from poison control center. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If material is ingested, immediately contact a poison control center.

Notes to physician

In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.

General advice

If you feel unwell, seek medical advice (show the label where possible). In case of shortness of breath, give oxygen. Keep victim warm. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties

Strong oxidizer - avoid contact with reducing agents. The product is not flammable. Not a fire hazard.

Extinguishing media

Suitable extinguishing media

Water.

Protection of firefighters

Protective equipment and precautions for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers. Cool containers exposed to flames with water until well after the fire is out.

Specific methods

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Keep upwind. Keep out of low areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust from the spilled material. Wear a dust mask if dust is generated above exposure limits.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

Methods for containment

If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Should not be released into the environment. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation. Collect dust or particulates using a vacuum cleaner with a HEPA filter. Following product recovery, flush area with water.

7. Handling and Storage

Handling

Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust from this material. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Wash thoroughly after handling. Avoid release to the environment. Handle and open container with care.

Storage

Store in a well-ventilated place. Keep container tightly closed. Guard against dust accumulation of this material. Keep out of the reach of children. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Material

CAS

Type

Value

Form

POTASSIUM DICHROMATE

7778-50-9

TWA

0.05 mg/m3

U.S. - OSHA

Material	CAS #	Type	Value	Form
POTASSIUM DICHROMATE	7778-50-9	Ceiling	0.1 mg/m3	
		TWA	0.005 mg/m3	

Engineering controls

Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Respiratory protection**

Wear respirator with dust filter.

Hand protection

Wear protective gloves.

Eye / face protection

Wear dust goggles.

Skin protection

Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Wear suitable protective clothing. Wear protective gloves.

General hygiene considerations

Do not breathe dust. Do not get this material in contact with eyes. Do not get this material in contact with skin. Wash hands after handling and before eating. Handle in accordance with good industrial hygiene and safety practice.

General

Not normally needed.

9. Physical & Chemical Properties

Appearance	Crystals and powder.
Color	Red-orange.
Odor	Odorless.
Odor threshold	Not available.
Physical state	Solid.
Form	Solid. Powder.
pH	3.6 - 4
Melting point	748.4 °F (398 °C) estimated
Freezing point	748.4 °F (398 °C)
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	2.676
Relative density	2.6757 g/cm3 estimated
Solubility (water)	490 g/l @ 0 C
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	932 °F (500 °C)
Molecular weight	294.1800 g/mol
Molecular formula	K2Cr2O7

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Incompatible materials	Reducing agents Alcohols. Organic solvents.
Hazardous decomposition products	No hazardous decomposition products are known.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects

Acute Dermal: LD 50

POTASSIUM DICHROMATE 7778-50-9 New Zealand rabbit 403 - 490 mg/kg Male

Acute Inhalation: LC 50

POTASSIUM DICHROMATE 7778-50-9 Fischer 344 rat 0.029 mg/l 4 h Female

POTASSIUM DICHROMATE 7778-50-9 Fischer 344 rat 0.035 mg/l 4 h Male

Acute Oral: LD 50

POTASSIUM DICHROMATE 7778-50-9 Mouse 190 mg/kg

POTASSIUM DICHROMATE 7778-50-9 Rat 17 - 26 mg/kg Female, Male

Acute Toxicity other routes: LD 50

POTASSIUM DICHROMATE 7778-50-9 Mouse 37 mg/kg Intraperitoneal

Toxicology data for the preparation

Acute LD50: 403 - 490 mg/kg, New Zealand rabbit, Dermal

Acute LD50: 37 mg/kg, Mouse, Other

Acute LC50: 0.03 mg/l, Fischer 344 rat, Inhalation

Acute LC50: 0.04 mg/l, Fischer 344 rat, Inhalation

Acute LD50: 190 mg/kg, Mouse, Oral

Acute LD50: 17 - 26 mg/kg, Rat, Oral

Local effects Inhalation of dusts may cause respiratory irritation.

Carcinogenicity Confirmed Human Carcinogen

IARC Monographs: Evidence of carcinogenicity in humans

POTASSIUM DICHROMATE 7778-50-9 Sufficient data.

US ACGIH Threshold Limit Values: A1 carcinogen

POTASSIUM DICHROMATE 7778-50-9 Group A1 Confirmed human carcinogen.

US NTP Report on Carcinogens: Known carcinogen

POTASSIUM DICHROMATE 7778-50-9 Known carcinogen.

US OSHA Specifically Regulated Substances: Cancer hazard

POTASSIUM DICHROMATE 7778-50-9 Cancer hazard.

12. Ecological Information

Ecotoxicity

Components of this product are hazardous to aquatic life.

Fish Toxicity: LD 50

POTASSIUM DICHROMATE	7778-50-9	Bleak (<i>Alburnus alburnus</i>) 134.9 mg/l 48 h Not reported Mortality
POTASSIUM DICHROMATE	7778-50-9	Goldfish (<i>Carassius auratus</i>) 269.2 mg/l 48 h Not reported Mortality
POTASSIUM DICHROMATE	7778-50-9	Rainbow trout,donaldson trout (<i>Oncorhynchus mykiss</i>) 53.7 mg/l 48 h Not reported Mortality

Invertebrate Toxicity: EC 50

POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.02 - 0.03 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.68 - 1.3 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.23 - 0.32 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0171 - 0.024 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Brine shrimp (<i>Artemia</i> sp.) 47.2 - 135 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.85 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.97 - 1.31 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) > 0 < 0.005 mg/l 14 d Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Opossum shrimp (<i>Americamysis bahia</i>) 5.65 - 11.5 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0259 - 0.0529 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.94 - 1.3 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Tubificid worm (<i>Tubifex tubifex</i>) 0.289 - 0.405 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Opossum shrimp (<i>Americamysis bahia</i>) 3.4 - 8.83 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0211 - 0.029 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.1639 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.99 - 1.3 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.1004 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.1741 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.25 - 1.61 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.09 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.98 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0261 - 0.0492 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.47 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Tubificid worm (<i>Tubifex tubifex</i>) 0.161 - 0.223 mg/l 48 h Renewal Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.02 - 0.0233 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.11 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.26094 - 0.26328 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1 - 1.19 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 3.1 mg/l 96 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.96 - 1.15 mg/l 48 h Not reported Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.17975 - 0.19455 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.35 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) > 0.003 < 0.005 mg/l 3 d Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.3 - 67.2 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.1 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.336 - 0.389 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Opossum shrimp (<i>Americamysis bahia</i>) 5.6 - 7.1 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.8 - 1.1 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0845 - 0.127 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Opossum shrimp (<i>Mysidopsis almyra</i>) 3.4 - 8.8 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0022 - 0.0032 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.2204 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Opossum shrimp (<i>Americamysis bahia</i>) 3.95 - 29.84 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.57 - 0.71 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.22 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.91 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.81 - 1.4 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0295 - 0.0419 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.24 - 1.55 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.11 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.1 - 0.32 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Amphipod (<i>Crangonyx pseudogracilis</i>) 1.78 - 2.69 mg/l 48 h Renewal Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.1 - 1.46 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 3.5 - 10 mg/l 6 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Ceriodaphnia</i>) 0.03 - 0.13 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) > 0 < 0.003 mg/l 14 d Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.247 - 0.3 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.67 - 1.02 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.82 - 3.26 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.08 - 1.36 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0217 - 0.0279 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 143 - 353 mg/l 24 h Static Intoxication

POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.48 - 1.2 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 10 - 35 mg/l 4 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 41.5 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Brine shrimp (<i>Artemia sp.</i>) 100 - 180 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.085 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0196 - 0.0492 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.461 - 0.645 mg/l 20 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0294 - 0.0406 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia carinata</i>) 317 - 570 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.2 - 1.4 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1 - 1.5 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) < 1 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0329 - 0.0453 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.2 - 1.5 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 23 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.03 - 0.05 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.54 mg/l 24 h Diet or oral exposure Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 19 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Opossum shrimp (<i>Americamysis bahia</i>) 3.65 - 7.5 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0178 - 0.0223 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.16 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.11 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.3 - 1.6 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.24 - 2.49 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.7 - 1 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Tubificid worm (<i>Tubifex tubifex</i>) 0.149 - 0.225 mg/l 96 h Renewal Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Simocephalus vetulus</i>) 5 - 500 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 50 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.07 - 0.09 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.59 - 1.06 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 22 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.17 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) > 0 < 0.003 mg/l 7 d Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1 - 2 mg/l 24 h Renewal Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) > 0 < 0.005 mg/l 7 d Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.168 - 0.194 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.22788 - 0.23036 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 31.6 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Opossum shrimp (<i>Americamysis bahia</i>) 2.78 - 6.01 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0237 - 0.0322 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0201 - 0.0356 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia obtusa</i>) 0.01 - 0.45 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.6 - 1.1 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.33 - 1.85 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.14 - 1.46 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.22 mg/l 24 h Not reported Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.21 - 1.47 mg/l 24 h Not reported Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.9 - 1.1 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.08 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.21 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 21 mg/l 96 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0386 mg/l 48 h Not reported Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.22852 - 0.23087 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 47.5 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0202 - 0.0282 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.201 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 15 mg/l 96 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0266 - 0.0457 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.26 - 0.39 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.49 - 1.96 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.12 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.19413 - 0.19561 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0478 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1.08 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.19 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 1 - 4 mg/l 24 h Renewal Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.035 mg/l 48 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.36 mg/l 24 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.0137 - 0.0208 mg/l 96 h Static Intoxication
POTASSIUM DICHROMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.68 - 1.5 mg/l 24 h Static Intoxication

POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 2.09 - 2.9 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Ceriodaphnia pulchella</i>) < 500 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia obtusa</i>) 0.33 - 0.57 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.87 - 1.2 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.06 - 0.11 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 42 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 31.2 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Brine shrimp (<i>Artemia sp.</i>) 56 - 180 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.07 - 0.105 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Rotifer (<i>Philodina acuticornis</i>) 21 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.9 - 1.2 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.169 - 0.265 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.95 - 1.2 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.5 - 0.71 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 10 - 35 mg/l 2 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.09 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.5 - 2 mg/l 24 h Renewal Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.65 mg/l 48 h Not reported Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.93 - 1.1 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Amphipod (<i>Crangonyx pseudogracilis</i>) 0.36 - 0.5 mg/l 96 h Renewal Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.13 - 0.19 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.14 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.12 - 0.18 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Moina australiensis</i>) 0.0184 - 0.0258 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.186 - 0.362 mg/l 20 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) > 0 < 0.005 mg/l 3 d Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.82 - 1.08 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.08 - 0.11 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.16 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.2883 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Ceriodaphnia dubia</i>) 39 - 79 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.96 mg/l 24 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia pulex</i>) 0.07 - 0.12 mg/l 48 h Static Intoxication
POTASSIUM DICHRIMATE	7778-50-9	Water flea (<i>Daphnia magna</i>) 0.46584 - 0.57133 mg/l 24 h Static Intoxication

Micro-organisms Toxicity: LC 50

POTASSIUM DICHRIMATE	7778-50-9	Turbellarian, flatworm (<i>Dugesia tigrina</i>) 14 mg/l 96 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Protozoa (<i>Uronema nigricans</i>) 1.929 - 2.318 mg/l 24 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Protozoa (<i>Spirostomum ambiguum</i>) 35.2 mg/l 48 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Protozoa (<i>Spirostomum ambiguum</i>) 25.7 mg/l 24 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Protozoa (<i>Euplotes patella</i>) 8.757 - 11.712 mg/l 24 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Protozoa (<i>Euplotes affinis</i>) 2.434 - 4.516 mg/l 24 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Protozoa (<i>Aspidisca cicada</i>) 2.029 - 4.285 mg/l 24 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Protozoa (<i>Aspidisca cicada</i>) 124 - 151 mg/l 24 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Nematode (<i>Caenorhabditis elegans</i>) 56 - 72 mg/l 48 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Nematode (<i>Caenorhabditis elegans</i>) 36 - 46 mg/l 72 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Nematode (<i>Caenorhabditis elegans</i>) 149 - 164 mg/l 24 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Nematode (<i>Caenorhabditis elegans</i>) 0.03 - 0.1 mg/l 96 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Turbellarian, flatworm (<i>Dugesia tigrina</i>) 7.3 mg/l 96 h Static Mortality
POTASSIUM DICHRIMATE	7778-50-9	Diatom (<i>Nitzschia linearis</i>) 0.208 mg/l 5 d Static Mortality

Environmental effects Harmful to aquatic life.

Persistence and degradability Not available.

13. Disposal Considerations

Waste codes D002: Waste Corrosive material [pH ≤2 or ≥12.5, or corrosive to steel]
D007: Waste Chromium

Disposal instructions Dispose of this material and its container at hazardous or special waste collection point. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.

Waste from residues / unused products Not applicable.

14. Transport Information

DOT

Basic shipping requirements:

Proper shipping name	Toxic solid, inorganic, n.o.s.
Hazard class	6.1
UN number	UN3288
Packing group	II

Additional information:

Special provisions	IB8, IP2, IP4, T3, TP33
Packaging exceptions	153
Packaging non bulk	212
Packaging bulk	242
Reportable quantity	10
ERG number	151



15. Regulatory Information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

POTASSIUM DICHROMATE 7778-50-9 0.1 % N090

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

POTASSIUM DICHROMATE 7778-50-9 N090 Listed.

CERCLA (Superfund) reportable quantity

POTASSIUM DICHROMATE, CERTIFIED: 10.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - Yes

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

POTASSIUM DICHROMATE 7778-50-9 Listed.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

POTASSIUM DICHROMATE 7778-50-9 Listed: February 27, 1987 Carcinogenic.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

POTASSIUM DICHROMATE 7778-50-9 Listed: December 19, 2008 Developmental toxin.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

POTASSIUM DICHROMATE 7778-50-9 Listed: December 19, 2008 Female reproductive toxin.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

POTASSIUM DICHROMATE 7778-50-9 Listed: December 19, 2008 Male reproductive toxin.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

POTASSIUM DICHROMATE 7778-50-9 500 LBS

US - Pennsylvania RTK - Hazardous Substances: Listed substance

POTASSIUM DICHROMATE 7778-50-9 Listed.

US - Pennsylvania RTK - Hazardous Substances: Special hazard

POTASSIUM DICHROMATE 7778-50-9 Special hazard.

16. Other Information**Further information**

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 4*
Flammability: 0
Physical hazard: 3

NFPA ratings

Health: 4
Flammability: 0
Instability: 3
Special hazards: OX

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Issue date

27-Aug-2009

This data sheet contains changes from the previous version in section(s):

This document has undergone significant changes and should be reviewed in its entirety.