

MATERIAL SAFETY DATA SHEET**Product Name:** Potassium dichromate**CAS No.:** 7778-50-9**Version:** 0**1. Identification**

Product Code : 90211, 90502
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2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
POTASSIUM DICHROMATE	7778-50-9	99-100 %

3. Hazards Identification

Emergency Overview : POISON! DANGER! MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE A FIRE. CORROSIVE. CAUSES SEVERE BURNS TO EVERY AREA OF CONTACT. AFFECTS THE RESPIRATORY SYSTEM, LIVER, KIDNEYS, EYES, SKIN AND BLOOD. MAY CAUSE ALLERGIC REACTION. CANCER HAZARD. CAN CAUSE CANCER.
Risk of cancer depends on duration and level of exposure.

Saf-T-Data

Health Rating : 4 - Extreme (Cancer Causing)
Flammability Rating : 0 - None
Reactivity Rating : 3 - Severe (Oxidizer)
Contact Rating : 4 - Extreme (Life)

Potential Health Effects

Inhalation : Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. May cause ulceration and perforation of the nasal septum. Symptoms may include sore throat, coughing, shortness of breath, and labored breathing. May produce pulmonary sensitization or allergic asthma. Higher exposures may cause pulmonary edema.

Ingestion : Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach, leading to death. Can cause sore throat, vomiting, diarrhea. May cause violent gastroenteritis, peripheral vascular collapse, dizziness, intense thirst, muscle cramps, shock, coma,

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- abnormal bleeding, fever, liver damage and acute renal failure.
- Skin Contact** : Corrosive. Symptoms of redness, pain, and severe burn can occur. Dusts and strong solutions may cause severe irritation. Contact with broken skin may cause ulcers (chrome sores) and absorption, which may cause systemic poisoning, affecting kidney and liver functions. May cause skin sensitization. Highly Toxic! May be absorbed through the skin; symptoms may parallel ingestion.
- Eye Contact** : Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns. May cause corneal injury or blindness.
- Chronic Exposure** : Repeated or prolonged exposure can cause ulceration and perforation of the nasal septum, respiratory irritation, liver and kidney damage and ulceration of the skin. Ulcerations at first may be painless, but may penetrate to the bone producing "chrome holes." Known to be a human carcinogen.
- Aggravation of Pre-existing Conditions** : Persons with pre-existing skin disorders, asthma, allergies or known sensitization to chromic acid or chromates may be more susceptible to the effects of this material.

4. First Aid Measures

- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Inhalation** : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion** : If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Skin Contact** : Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse.
- Eye contact** : Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.

MATERIAL SAFETY DATA SHEET**Product Name:** Potassium dichromate**CAS No.:** 7778-50-9**Version:** 0**5. Fire fighting measures**

- Fire** : Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Releases oxygen, upon decomposition, which enhances combustion..
- Explosion** : Contact with oxidizable substances may cause extremely violent combustion.
- Fire Extinguishing Media** : Flood with large amounts of water. Water spray may be used to keep fire exposed containers cool. Do not allow water runoff to enter sewers or waterways.
- Special Information** : In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

- Personal precautions, protective equipment and emergency procedures** : Keep unauthorized personnel away. Keep upwind. Ventilate closed spaces before entering them. Avoid inhalation of dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
- Methods and material for containment and cleaning up** : Sweep up and place in a clearly labeled container for chemical waste.
Clean surface thoroughly to remove residual contamination.
- Notification Procedures** : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
- Environmental precautions** : Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

- Precautions for safe handling** : Protect against physical damage. Store in a dry location separate from combustible, organic or other readily oxidizable materials. Avoid storage on wood floors. Remove and dispose of any spilled dichromates; do not return to original containers. Wear special protective equipment for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions

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listed for the product.

Conditions for safe storage, including any incompatibilities : Keep containers tightly closed. Store in cool, dry place. Store in a well-ventilated place.

8. Exposure Controls Personal Protection**Control parameters****Occupational exposure limits**

OSHA Permissible Exposure Limit (PEL) : For chromic acid and chromates, as CrO₃ = 0.1 mg/m³ (ceiling)

ACGIH Threshold Limit Value (TLV) : For water-soluble Cr(VI) compounds, as Cr = 0.05 mg/m³ (TWA), A1 - confirmed human carcinogen.

Ventilation System : A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved): : If the exposure limit is exceeded and engineering controls are not feasible, a half facepiece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest.. A full-face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection : Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: : Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Other : Clothing contaminated with this material may be an increased fire hazard. Wash contaminated clothing as soon as possible.

Respiratory protection : In case of inadequate ventilation use suitable respirator.

Hygiene measures : Always observe good personal hygiene measures, such as washing after

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handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and Chemical Properties

Appearance	:	Orange-red crystals or powder.
Odor	:	Odorless
pH	:	4.04 (1% aq. solution) 3.57 (10% aq. solution)
Melting point/freezing point	:	398C (748F)
Initial boiling point and boiling range	:	500C (932F)
Flash Point	:	No information found
Vapor pressure	:	No information found.
Vapor density	:	No information found
Relative density	:	2.676 @ 25C/4C
Solubility in water	:	6.5% @ 10C (50F) in water.
Solubility (other)	:	No data available.
Formula	:	K ₂ Cr ₂ O ₇
Molecular Weight	:	294.18 g/mol

10. Stability and Reactivity

Stability	:	Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products	:	Burning may produce chrome oxides.
Hazardous Polymerization	:	This substance does not polymerize.
Incompatibilities:	:	Reducing agents, acetone plus sulfuric acid, boron plus silicon, ethylene glycol, iron, hydrazine, and hydroxylamine. Any combustible, organic or other readily oxidizable material (paper, wood, sulfur, aluminum or Plastics).
Conditions to Avoid:	:	Heat, incompatibles.

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1. Toxicological Information

Toxicological Data:

Oral rat LD50: 25 mg/kg. Skin rabbit LD50: 14 mg/kg Investigated as a tumorigen, mutagen, reproductive effector.

Cancer Lists

Ingredient	IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE	US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Potassium Dichromate (7778-50-9)	1	Yes	No

12. Ecological Information

Ecotoxicity

Acute hazards to the aquatic environment :

Fish Product : No data available.

Aquatic invertebrates Product : No data available.

Chronic hazards to the aquatic environment :

Fish Product : No data available.

Aquatic invertebrates Product : No data available.

Toxicity to Aquatic Plants Product: : No data available.

Persistence and degradability

Biodegradation Product : No data available.

BOD/COD ratio Product : No data available.

Bioaccumulative potential

Bioconcentration factor (BCF) Product : No data available on bioaccumulation.

Product

Partition coefficient n-octanol / water (log Kow) Product : No data available.

Mobility in soil

Mobility in soil : No data available.

Other adverse effects : No data available.

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- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN3086	POTASSIUM DICHROMATE	6.1, 5.1	I	No
IMDG	UN3086	POTASSIUM DICHROMATE	6.1, 5.1	I	No
IATA	UN3086	POTASSIUM DICHROMATE	6.1, 5.1	I	No

15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

16. Other Information**Issue Date** :01/08/2014**Version** : 0

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