

Potassium Dichromate

SECTION 1. IDENTIFICATION

Product Identifier	Potassium Dichromate
Other Means of Identification	Potassium bichromate, Red potassium chromate
Product Code(s)	PO3510, PO3520
Product Family	Inorganic Solid
Recommended Use	Laboratory.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	1569

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Oxidizing solid - Category 2; Acute toxicity (Oral) - Category 3; Acute toxicity (Dermal) - Category 4; Acute toxicity (Inhalation) - Category 2; Skin corrosion - Category 1B; Eye irritation - Category 2B; Respiratory sensitization - Category 1; Skin sensitization - Category 1; Germ cell mutagenicity - Category 1B; Carcinogenicity - Category 1B; Reproductive toxicity - Category 1B; Specific target organ toxicity (single exposure) - Category 1

Label Elements



Signal Word:
Danger

Hazard Statement(s):

May intensify fire; oxidizer.
Toxic if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Toxic if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause genetic defects.
May cause cancer.
May damage fertility or the unborn child.
Causes damage to organs through prolonged or repeated exposure.

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Precautionary Statement(s):

Prevention:

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep or store away from clothing and other combustible materials.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response:

IF ON SKIN: Wash with plenty of water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

Toxic to aquatic life.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Potassium dichromate	7778-50-9	>= 99	Potassium bichromate, Red potassium chromate	

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing has stopped, trained personnel should begin rescue breathing. Seek immediate medical attention.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Immediately call a Poison Centre or doctor.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor.

Ingestion

Rinse mouth with water. Do not induce vomiting. Immediately call a Poison Centre or doctor.

First-aid Comments

Treat symptomatically. Symptoms may be delayed.

Most Important Symptoms and Effects, Acute and Delayed

For most important symptoms and effects (acute and delayed), see Section 2 (Hazard Identification) and Section 11 (Toxicological Information) of this SDS.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Does not burn. Oxidizer. Releases oxygen to create an oxygen-rich atmosphere. Will cause combustible materials to ignite more readily. May cause or intensify fire. Heating increases the release of toxic vapour.

In a fire, the following hazardous materials may be generated: Potassium Oxide Chromium Oxide.

Special Protective Equipment and Precautions for Fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full

protective gear. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

Methods and Materials for Containment and Cleaning Up

Collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Avoid dry sweeping. If necessary, use a dust suppressant such as water. Do not use compressed air for clean-up. Store recovered product in suitable containers that are: tightly-covered.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating dusts. Only use where there is adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Prevent accidental contact with flammable and combustible materials. Keep containers tightly closed when not in use or empty. Wash hands thoroughly after handling this material.

Conditions for Safe Storage

Store in an area that is: dry, well-ventilated, separate from incompatible materials (see Section 10: Stability and Reactivity), clear of combustible and flammable materials (e.g. old rags, cardboard).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Potassium dichromate	0.05 mg/m3 A1			0.1 mg/m3		

Potassium dichromate:

*NOTICE OF INTENDED CHANGE: ACGIH has published a Notice of Intended Change to revise the TLV-TWA to 0.0002 mg/m3 (Inhalable particulate matter) as Cr(VI) and to establish a TLV-STEL of 0.0005 mg/m3 (Inhalable particulate matter) as Cr(VI) with a Carcinogenicity designation of A1 (Hexavalent chromium compounds, including Chromite ore processing). In addition, water soluble compounds, like potassium dichromate, are proposed to have a Skin notation, a Dermal sensitization notation, and a Respiratory sensitization notation. The proposed TLV Basis is lung and sinonasal cancer, respiratory tract irritation and asthma.

A1 = Confirmed human carcinogen.

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

For non-routine or emergency situations: wear a NIOSH approved particulate respirator equipped with an N95, R95, or P95 filter, or, wear a NIOSH approved powered air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Yellow - red crystals.
Odour	Odourless
Odour Threshold	Not available
pH	Not available
Melting Point/Freezing Point	396 °C (745 °F) (melting); 396 °C (745 °F) (freezing)
Initial Boiling Point/Range	500 °C (932 °F)
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid, gas)	Will not burn.
Upper/Lower Flammability or Explosive Limit	Not applicable (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	2.676 at 25 °C
Solubility	Moderately soluble in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not applicable
Decomposition Temperature	> 500 °C (932 °F)
Viscosity	Not available (kinematic); Not available (dynamic)
Other Information	
Physical State	Solid

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Molecular Formula K₂Cr₂O₇
Molecular Weight 294.20

SECTION 10. STABILITY AND REACTIVITY

Reactivity

Mild oxidizer. May cause or intensify fire.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Incompatible materials. Excess heat. Generation of dust.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), strong reducing agents (e.g. hydrides), strong acids (e.g. hydrochloric acid), strong bases (e.g. sodium hydroxide), acid anhydrides (e.g. acetic anhydride), reducing agents (e.g. hydroquinone). Combustible materials.

Hazardous Decomposition Products

Chromium Oxide.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Potassium dichromate	99 mg/m ³ (rat) (4-hour exposure)	74 mg/kg (male rat)	1150 mg/kg (male rabbit)

Skin Corrosion/Irritation

Causes severe skin burns.

Serious Eye Damage/Irritation

Causes serious eye damage based on skin corrosion information.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

Causes severe nose and throat irritation.

Ingestion

Causes severe irritation or burns to the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

Blood tests may show abnormal results. Causes harmful effects on the kidneys, harmful effects on the liver.

Respiratory and/or Skin Sensitization

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory sensitization.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Potassium dichromate	Group 1	A1	Known carcinogen	Known carcinogen

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Key to Abbreviations

Group 1 = Carcinogenic to humans. A1 = Confirmed human carcinogen.

Reproductive Toxicity

Development of Offspring

May harm the unborn child.

Sexual Function and Fertility

May cause effects on sexual function and/or fertility.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

May cause genetic effects.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
US DOT	UN3087	OXIDIZING SOLID, TOXIC, N.O.S. (Potassium dichromate)	5.1	II
Canadian TDG	UN3087	OXIDIZING SOLID, TOXIC, N.O.S.	5.1	II

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

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References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
GESTIS Substance Database (included by CCOHS).

Disclaimer This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.

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