

Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

Initial preparation date: 01.16.2018

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Potassium Dichromate

SECTION 1: Identification

Product identifier

Product name: Potassium Dichromate

Product code: PD5005

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory Chemicals

Uses advised against: Not determined or not applicable.

Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:

United States

AquaPhoenix Scientific, Inc.

860 Gitts Run Road

Hanover, PA 17331

1-717-632-1291

Emergency telephone number:

United States

ChemTel Inc

+1(800)255-3924

+1(813)248-0585

SECTION 2: Hazard identification

GHS classification:

Oxidizing solids, category 2

Acute toxicity (oral), category 3

Acute toxicity (dermal), category 4

Acute toxicity (inhalation), category 2

Skin corrosion, category 1B

Skin sensitization, category 1

Germ cell mutagenicity, category 1B

Respiratory sensitization, category 1

Carcinogenicity, category 1B

Specific target organ toxicity - repeated exposure, category 1

Reproductive toxicity, category 1B

Chronic aquatic hazard, category 1

Acute aquatic hazard, category 1

Label elements

Hazard pictograms:



Signal word: Danger

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Hazard statements:

- H272 May intensify fire; oxidizer
- H301 Toxic if swallowed
- H312 Harmful in contact with skin
- H330 Fatal if inhaled
- H314 Causes severe skin burns and eye damage
- H317 May cause an allergic skin reaction
- H340 May cause genetic defects
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H350 May cause cancer
- H372 Causes damage to organs through prolonged or repeated exposure
- H360 May damage fertility or the unborn child
- H410 Very toxic to aquatic life with long lasting effects
- H400 Very toxic to aquatic life

Precautionary statements:

- P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking
- P220 Keep/Store away from clothing/combustible materials
- P221 Take any precaution to avoid mixing with combustibles
- P280 Wear protective gloves/protective clothing/eye protection/face protection
- P264 Wash skin thoroughly after handling
- P270 Do not eat, drink or smoke when using this product
- P260 Do not breathe dust/fume/gas/mist/vapors/spray
- P271 Use only outdoors or in a well-ventilated area
- P284 Wear respiratory protection
- P272 Contaminated work clothing should not be allowed out of the workplace
- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P285 In case of inadequate ventilation wear respiratory protection
- P273 Avoid release to the environment
- P370+P378 In case of fire: Use agents recommended in section 5 for extinction
- P363 Wash contaminated clothing before reuse
- P302+P352+P312 If on skin: Wash with soap and water. Call a poison center or doctor/physician if you feel unwell
- P320 Specific treatment is urgent (see ... on this label)
- P304+P340+P310 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician
- P301+P330+P331+P310 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.
- P303+P361+P353+P310 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
- P305+P351+P338+P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- P333+P313 If skin irritation or a rash occurs: Get medical advice/attention
- P308+P313 If exposed or concerned: Get medical advice/attention
- P391 Collect spillage
- P405 Store locked up
- P403+P233 Store in a well ventilated place. Keep container tightly closed
- P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

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SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7778-50-9	Potassium Dichromate	100

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:

Not determined or not available.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell
Move exposed individual to fresh air
Immediately call a POISON CONTROL CENTER or seek medical attention

After skin contact:

Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention
Wash affected area with soap and water
Seek medical attention if symptoms develop or persist
Immediately remove all contaminated clothing
Immediately call a POISON CONTROL CENTER or seek medical attention

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention
Remove contact lens(es) if able to do so during rinsing
Immediately call a POISON CONTROL CENTER or seek medical attention

After ingestion:

Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists
Immediately call a POISON CONTROL CENTER or seek medical attention
Do not induce vomiting
Rinse mouth and then drink plenty of water

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not available.

Delayed symptoms and effects:

Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not available.

Notes for the doctor:

Not determined or not available.

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SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:

Not determined or not applicable.

Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

Will release oxygen when heated, intensifying a fire

Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion

Heating causes a rise in pressure, risk of bursting and combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Sweep or scoop up solid material while minimizing dust generation

Dispose of contents / container in accordance with local regulations

Reference to other sections:

Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:

Use only with adequate ventilation.

Avoid breathing dust.

Do not eat, drink, smoke or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Keep container dry.

Store in a cool, well-ventilated area.

Store away from flammable and combustible materials (paper, wood).

Store away from reducing agents (zinc, alkaline metals, formic acid).

SECTION 8: Exposure controls/personal protection

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Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Potassium Dichromate	7778-50-9	ACGIH TLV 0.05 mg/m ³ , as Cr
United States (OSHA)	Potassium Dichromate	7778-50-9	OSHA PEL 0.005 mg/m ³ , as Cr(VI)
NIOSH	Potassium Dichromate	7778-50-9	NIOSH IDLH 250 mg/m ³ as Chromium(II) compounds
	Potassium Dichromate	7778-50-9	NIOSH IDLH 25 mg/m ³ as Chromium(III) compounds

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

General hygienic measures:

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and at the end of work.

Wash contaminated clothing before reuse.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance (physical state, color):	Orange solid
Odor:	Not determined
Odor threshold:	Not determined
pH-value:	3.5 - 5.0 at 29.4 g/l at 25 °C
Melting/Freezing point:	398° C
Boiling point/range:	500° C

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Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid, gaseous):	Not determined
Explosion limit upper:	Not determined
Explosion limit lower:	Not determined
Vapor pressure:	Not determined
Vapor density:	Not determined
Density:	Not determined
Relative density:	2.680 g/cm ³
Solubilities:	Soluble in water, 29.4 g/l at 20 °C
Partition coefficient (n-octanol/water):	log pow: 5
Auto/Self-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Dynamic viscosity:	Not determined
Kinematic viscosity:	Not determined
Explosive properties	Not determined
Oxidizing properties	The substance or mixture is classified as oxidizer category 2

Other information

SECTION 10: Stability and reactivity

Reactivity:

Reactive with metallic powders.

Chemical stability:

Stable under normal conditions of use and storage.

Possibility of hazardous reactions:

None under normal conditions of use and storage.

Conditions to avoid:

None known.

Incompatible materials:

Organic materials. Acids. Powdered metals. Hydrazine.

Hazardous decomposition products:

Potassium oxides. Chromium oxides.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Toxic if swallowed Harmful in contact with skin Fatal if inhaled

Product data: No data available.

Substance data:

Name	Route	Result
Potassium Dichromate	oral	LD50 - Mouse - 190 mg/kg
	inhalation	LC50 - Rat - 94.0 mg/m ³
	dermal	LD50 - Rabbit - 1,150 mg/kg

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Skin corrosion/irritation

Assessment: Causes severe skin burns and eye damage

Product data: No data available.

Substance data:

Name	Result
Potassium Dichromate	Causes severe skin burns and eye damage.

Serious eye damage/irritation

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Respiratory or skin sensitization

Assessment: May cause an allergic skin reaction May cause allergy or asthma symptoms or breathing difficulties if inhaled

Product data: No data available.

Substance data:

Name	Result
Potassium Dichromate	May cause an allergic skin reaction.
	May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Carcinogenicity

Assessment: May cause cancer

Product data: No data available.

Substance data:

Name	Species	Result
Potassium Dichromate	Potassium Dichromate	Suspected of causing cancer through inhalation.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP):

Name	Classification
Potassium Dichromate	Known to be human carcinogens

Germ cell mutagenicity

Assessment: May cause genetic defects

Product data: No data available.

Substance data:

Name	Result
Potassium Dichromate	Suspected of causing genetic defects.

Reproductive toxicity

Assessment: May damage fertility or the unborn child

Product data: No data available.

Substance data:

Name	Result
Potassium Dichromate	May damage fertility or the unborn child.

Specific target organ toxicity (single exposure)

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Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Potassium Dichromate	Specific Target Organ Toxicity, Repeated Exposure - Causes damage to cardiovascular/hematological organs through prolonged or repeated exposure.

Specific target organ toxicity (repeated exposure)

Assessment: Causes damage to organs through prolonged or repeated exposure

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Very toxic to aquatic life

Product data: No data available.

Substance data:

Name	Result
Potassium Dichromate	EC50 - Navicula seminulum (Diatom) - 0.272 mg/L - 96 h
	EC50 - Moina australiensis - 0.0247 mg/L - 48 h
	NOEC - Daphnia carinata (Water Flea) - 0.050 mg/L - 14 d
	LC50 - Lepomis macrochirus (Bluegill) - 0.113 mg/L - 96 h

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

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SECTION 13: Disposal considerations

Disposal methods:



It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information



Canadian Transportation of Dangerous Goods (TDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	3086
UN proper shipping name	TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)
UN transport hazard class(es)	6 (5.1)  
Packing group	II
Environmental hazards	None
Special precautions for user	None
Excepted quantities	1 G
Limited quantity	500 G

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	3086
UN proper shipping name	TOXIC SOLID, OXIDIZING, N.O.S. (Potassium dichromate)
UN transport hazard class(es)	6 (5.1)  
Packing group	II
Environmental hazards	None
Special precautions for user	None
Excepted quantities	1 G
Passenger and cargo	1 KG
Cargo aircraft only	15 KG
Limited quantity	500 G

SECTION 15: Regulatory information

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Canada regulations

Domestic substances list (DSL):

7778-50-9	Potassium Dichromate	Listed
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Non-domestic substances list (NDSL): Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation and disposal 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, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

NFPA: 4-0-1-ox

HMIS: 0-4-1

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End of Safety Data Sheet