

## Potassium Dichromate 0.150M

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Potassium Dichromate 0.150M

**Synonyms/Generic Names:** Potassium Bichromate, Bichromate of Potash

**Product Number:** 9303

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information:** 920-623-2140 (Monday-Friday 8:00-4:30)  
[www.columbuschemical.com](http://www.columbuschemical.com)

**In Case of Emergency Call:** CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**Signal Word:** Danger

**Pictograms:**



**GHS Classification:**

Acute toxicity, Oral	Category 4
Acute toxicity, Dermal	Category 3
Acute toxicity, Inhalation	Category 5
Skin corrosion	Category 1B
Serious eye damage	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Reproductive toxicity	Category 1B
Acute aquatic toxicity	Category 2

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H333	May be harmful if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.

H401	Toxic to aquatic life.
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**Precautionary Statements:**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do not induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P361+P3646	Take off immediately all contaminated clothing and wash it before reuse.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

**Potential Health Effects**

<b>Eyes</b>	Causes eye burns.
<b>Inhalation</b>	May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
<b>Skin</b>	May be fatal if absorbed through skin. Causes skin burns.
<b>Ingestion</b>	May be fatal if swallowed.

**NFPA Ratings**

<b>Health</b>	3
<b>Flammability</b>	0
<b>Reactivity</b>	2
<b>Specific hazard</b>	N/A

**HMIS Ratings**

<b>Health</b>	4
<b>Fire</b>	0
<b>Reactivity</b>	1

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Water	Balance	7732-18-5	231-791-2	H <sub>2</sub> O	18.00 g/mol
Potassium Dichromate	4 - 5	7778-50-9	231-906-6	K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	294.19 g/mol

**4. FIRST-AID MEASURES**

<b>Eyes</b>	Immediately rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
<b>Skin</b>	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

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## 5. FIRE-FIGHTING MEASURES

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<b>Suitable (and unsuitable) extinguishing media</b>	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Emits toxic fumes (oxides of potassium and chromium) under fire conditions. (See also Stability and Reactivity section).

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## 6. ACCIDENTAL RELEASE MEASURES

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<b>Personal precautions, protective equipment and emergency procedures</b>	See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Neutralize spill. Absorb with inert material. Sweep up and place in suitable, closed containers for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste and cleanup materials in accordance with regulations.

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## 7. HANDLING AND STORAGE

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### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use. Avoid formation of aerosols.

### Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well-ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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### Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Potassium Dichromate	0.1 mg/m <sup>3</sup>	CEIL	OSHA
	0.005 mg/m <sup>3</sup>	PEL	OSHA
	0.05 mg/m <sup>3</sup>	TLV	ACGIH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses or goggles and face shield.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

<b>Skin</b>	Wear nitrile or rubber gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<b>Other</b>	Not Available

#### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, light orange liquid
Odor	No odor
Odor threshold	Not Available
pH	3.5-5.0
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Relative density	1.015-1.025
Solubility (ies)	Soluble
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Not Available
<b>Incompatible Materials</b>	Organic materials, powdered metals, hydrazine.
<b>Hazardous Decomposition Products</b>	Oxides of potassium and chromium.

## 11. TOXICOLOGICAL INFORMATION

#### Acute Toxicity

<b>Skin</b>	LD50 Dermal - rabbit - 233 mg/kg (estimated)
<b>Eyes</b>	Not Available
<b>Respiratory</b>	LC50 Inhalation - rat - 483 mg/m <sup>3</sup> (estimated)
<b>Ingestion</b>	LD50 Oral - rat - 416 mg/kg (estimated)

#### Carcinogenicity

<b>IARC</b>	1 - Group 1: Carcinogenic to humans (Potassium dichromate).
<b>ACGIH</b>	A1: Confirmed human carcinogen (Potassium dichromate).
<b>NTP</b>	Known to be carcinogens (Potassium dichromate).
<b>OSHA</b>	1910.1026 (Potassium dichromate).

#### Signs & Symptoms of Exposure

<b>Skin</b>	It causes skin irritation and may cause skin burns.
<b>Eyes</b>	Irritation, redness, watering eyes, itchiness, possible loss of vision, transient corneal bulging, residual irregular astigmatism, and anesthesia of the area after bulging resolves.
<b>Respiratory</b>	Sneezing, rhinorrhea, throat erythema, nasal septum lesions, or perforation with bleeding, discharge, or crusting of eye.
<b>Ingestion</b>	abdominal and esophageal pain, nausea, vomiting, hypermotility, diarrhea, gastrointestinal tract irritation and bleeding, respiratory distress, cyanosis, coma, and death.

<b>Chronic Toxicity</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	May alter genetic material.
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Not Available
<b>Reproductive Toxicity</b>	Presumed human reproductive toxicant.
<b>Respiratory/Skin Sensitization</b>	Not Available

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## 12. ECOLOGICAL INFORMATION

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### Ecotoxicity

<b>Aquatic Vertebrate</b>	LC50 - Lepomis macrochirus – 2.18 mg/l - 96.0 h (estimated)
<b>Aquatic Invertebrate</b>	EC50 - Daphnia magna (Water flea) - 0.058 mg/l - 48 h (estimated)
<b>Terrestrial</b>	EC50 - Pseudokirchneriella subcapitata – 5.17 mg/l - 72 h (estimated)

<b>Persistence and Degradability</b>	Not Available
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	Very toxic to aquatic life.

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## 13. DISPOSAL CONSIDERATIONS

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<b>Waste Product or Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

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## 14. TRANSPORTATION INFORMATION

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US DOT	UN3287, Toxic liquid, inorganic, n.o.s., (potassium dichromate), 6.1, PG III
TDG	UN3287, TOXIC LIQUID, INORGANIC, N.O.S., (POTASSIUM DICHROMATE), 6.1, PG III

IMDG	UN3287, TOXIC LIQUID, INORGANIC, N.O.S., (POTASSIUM DICHROMATE), 6.1, PG III
Marine Pollutant	No
IATA/ICAO	UN3287, Toxic liquid, inorganic, n.o.s., (potassium dichromate), 6.1, PG III

## 15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Listed: Chromium (hexavalent compounds)
Massachusetts: Toxic or Hazardous Substance List	Listed: Chromium bichromate
Pennsylvania: Hazardous Substance List	Listed: Chromic acid (H <sub>2</sub> CR <sub>2</sub> O <sub>7</sub> ), Dipotassium salt
New Jersey: Right to Know Hazardous Substance List	Listed: Potassium dichromate
Rhode Island: Hazardous Substance List	Listed: Potassium dichromate
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Acute Health Hazard, Chronic Health Hazard
SARA 312	Acute Health Hazard, Chronic Health Hazard
SARA 313	Listed: Potassium bichromate
WHMIS Canada	Class D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). Class D-2A: Material causing other toxic effects (VERY TOXIC). Class E: Corrosive material

## 16. OTHER INFORMATION

Revision	Date
Revision 1	10/12/2012
Revision 2	11/14/2013
Revision 3	06/16/2014
Revision 4	05/29/2015
Revision 5	12/11/2018
Revision 6	07/28/2020

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