

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Potassium Dichromate
CAS number	7778-50-9
Synonyms	Potassium bichromate, Dipotassium dichromate, Dichromic acid, Dipotassium salt

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals.
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification


2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

- Oxidizing solids (Category 2)
- Acute Oral Toxicity (Category 3)
- Acute Dermal Toxicity (Category 4)
- Acute Inhalation Toxicity - Dusts and Mists (Category 2)
- Skin Corrosion/Irritation (Category 1B)
- Serious Eye Damage/Eye Irritation (Category 1)

Respiratory Sensitization (Category 1)
 Skin Sensitization (Category 1)
 Germ Cell Mutagenicity (Category 1B)
 Carcinogenicity (Category 1A)
 Reproductive Toxicity (Category 1B)
 Specific Target Organ Toxicity - single exposure (Category 3)
 Target Organs - Respiratory System
 Specific Target Organ Toxicity - repeated exposure (Category 1)
 Target Organs - Respiratory System, Liver, Kidney, Blood.

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	<p>May intensify fire; oxidizer Toxic if swallowed Harmful in contact with skin Fatal if inhaled Causes severe skin burns and eye damage May cause respiratory irritation May cause an allergic skin reaction May cause allergy or asthma symptoms or breathing difficulties if inhaled May cause genetic defects May cause cancer May damage fertility. May damage the unborn child Causes damage to organs through prolonged or repeated exposure</p>
Precautionary statements	<p>Obtain special instructions before use Do not handle until all safety precautions have been read and understood Use personal protective equipment as required Wash face, hands and any exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Do not get in eyes, on skin, or on clothing Do not breathe dust/fume/gas/mist/vapors/spray Use only outdoors or in a well-ventilated area Wear respiratory protection In case of inadequate ventilation wear respiratory protection Contaminated work clothing should not be allowed out of the workplace Wear protective gloves Keep away from heat/sparks/open flames/hot surfaces. - No smoking Keep/Store away from clothing/ other combustible materials Take any precaution to avoid mixing with combustibles Immediately call a POISON CENTER or doctor/physician IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Wash contaminated clothing before reuse</p>

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
 If skin irritation or rash occurs: Get medical advice/attention
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 Rinse mouth
 Do NOT induce vomiting
 In case of fire: Use CO2, dry chemical, or foam for extinction
 Store locked up
 Store in a well-ventilated place. Keep container tightly closed
 Dispose of contents/container to an approved waste disposal plant

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Potassium dichromate	Potassium bichromate, Dipotassium dichromate, Dichromic acid, Dipotassium salt	7778-50-9	> 99%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.
If swallowed	Do NOT induce vomiting. Call a physician or Poison Control Center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

4.3 Indication of any immediate medical attention and special treatment needed

Note to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Do not allow run-off from fire-fighting to enter drains or water courses.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No information available.

Lower No information available.

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

NFPA

Health	Flammability	Instability	Physical hazards
4	0	1	OX

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional ecological Information. Avoid release to the environment. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep away from clothing and other combustible materials. Avoid dust formation.

6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not ingest. If swallowed then seek immediate medical assistance. Do not breathe (dust, vapor, mist, gas). Avoid dust formation. Keep away from clothing and other combustible materials.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Corrosives area.

Incompatibilities

Strong oxidizing agents. Reducing Agent. Acids. Strong bases. Acid anhydrides. Strong reducing agents. Combustible material.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
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Potassium dichromate	Ceiling	0.1 mg/m3
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US. ACGIH Threshold Limit Values

Component	Type	Value
Potassium dichromate	TWA	0.0002 mg/m3
	STEL	0.0005 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Potassium dichromate	IDLH	15 mg/m3
	TWA	0.0002 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves.

Body Protection

Wear appropriate clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	Orange
Odor	Odorless
Odor Threshold	No information available.
pH	4 (5% solution)
Melting Point/Range	398 °C / 748.4 °F
Boiling Point/Range	500 °C / 932 °F
Evaporation Rate	Not applicable.
Flammability (solid)	No information available.
Flammability or explosive limit	
Upper	No information available.
Lower	No information available.
Vapor Pressure	No information available.
Vapor Density	Not applicable.
Density	2.676
Solubility	Partly soluble in water
Partition coefficient; n-octanol/water	No information available.
Autoignition Temp	No information available.
Decomposition Temp	> 500 °C
Viscosity	Not applicable.
Molecular Formula	Cr ₂ K ₂ O ₇
Molecular Weight	294.19
VOC Content(%)	No information available.
Oxidizing properties	No information available.

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Reactive hazard.

10.2 Chemical stability

Oxidizer: Contact with combustible/organic material may cause fire.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible products. Excess heat. Combustible material. Avoid dust formation.

10.5 Incompatible materials

Strong oxidizing agents, Reducing Agent, Acids, Strong bases, Acid anhydrides, Strong reducing agents, Combustible material.

10.6 Hazardous decomposition products

Chromium oxide.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Potassium dichromate	130 mg/kg (rat)	1150 mg/kg (rabbit)	0.09 mg/L (rat)

Skin corrosion/irritation

Causes burns by all exposure routes.

Serious eye damage/eye irritation

Causes burns by all exposure routes.

Respiratory or skin sensitization

May cause sensitization by skin contact. May cause sensitization by inhalation.

Germ cell mutagenicity

May cause heritable genetic damage.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Potassium dichromate	7778-50-9	Group 1	Known	A1	Listed	A1

Specific target organ toxicity - single exposure

Respiratory system.

Specific target organ toxicity - repeated exposure

Respiratory system. Liver. Kidney. Blood.

Reproductive toxicity

May impair fertility.

Chronic effects

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

11.2 Additional Information

The toxicological properties have not been fully investigated.

SECTION 12: Ecological information

12.1 Toxicity

Product		Species	Test Results	
Potassium dichromate	LC50	Pimephales promelas	20.9 mg/L static	96 h
	LC50	Poecilia reticulata	24.81 - 34.55 mg/L semi-static	96 h
	LC50	Poecilia reticulata	23 - 41.2 mg/L static	96 h
	LC50	Pimephales promelas	15.41 - 30.36 mg/L flow-through	96 h
	LC50	Cyprinus carpio	> 139 mg/L static	96 h
	LC50	Lepomis macrochirus	113.6 - 155.7 mg/L flow-through	96 h
	LC50	Lepomis macrochirus	320 mg/L	96 h
	LC50	Lepomis macrochirus	65.6 - 137.6 mg/L static	96 h
	LC50	Oncorhynchus mykiss	12.3 mg/L semi-static	96 h
	LC50	Oryzias latipes	21.209 - 30.046 mg/L semi-static	96 h
	EC50	Water flea	1.4 mg/L	24 h

12.2 Persistence and degradability

May persist based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN-No	UN3087
Proper Shipping Name	Oxidizing solid, toxic, n.o.s. (Potassium Dichromate)
Hazard Class	5.1
Subsidiary Hazard Class	6.1
Packing Group	II

IMDG

UN-No	UN3087
Proper Shipping Name	Oxidizing solid, toxic, n.o.s. (Potassium Dichromate)
Hazard Class	5.1
Subsidiary Hazard Class	6.1
Packing Group	II

IATA

UN-No	UN3087
Proper Shipping Name	Oxidizing solid, toxic, n.o.s.(Potassium Dichromate)
Hazard Class	5.1
Subsidiary Hazard Class	6.1
Packing Group	II

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Listed (Potassium Dichromate (CAS 7778-50-9)). Section 6

CERCLA Hazardous Substance List (40 CFR 302.4)

Listed (Potassium Dichromate (CAS 7778-50-9)). RQ: 10 lb

SARA 304 Emergency release notification

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Listed (Potassium Dichromate (CAS 7778-50-9)).
Specifically Regulated Chemicals: 5 µg/m³ TWA ; 2.5 µg/m³ Action Level

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous

See section 2 for more information.

SARA 313 (TRI reporting)

Regulated (Potassium Dichromate (CAS 7778-50-9)).
Weight: > 99%; Threshold values: 0.1%

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Regulated (Potassium Dichromate (CAS 7778-50-9)).

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Listed (Potassium Dichromate (CAS 7778-50-9)).

US. New Jersey Worker and Community Right-to-Know Act

Listed (Potassium Dichromate (CAS 7778-50-9)).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed (Potassium Dichromate (CAS 7778-50-9)).

California Proposition 65

Listed (Potassium Dichromate (CAS 7778-50-9)).

SECTION 16: Other information

Issue date: 07/08/2009

Revision 1: 04/11/2014

Revision 2: 10/21/2024

SECTION 17: Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.