

Safety Data Sheet

Potassium Dichromate Solution

Section 1 - Chemical Product and Company Identification

SDS Name: Potassium Dichromate Solution

Catalog Numbers: SO-641

Company Identification: Transene Company, Inc., DBA ROWLEY BIOCHEMICAL, Inc.
10 ELECTRONICS AVENUE
DANVERS, MA 01923

For information, call: 978-739-4883

Emergency Number: 800-424-9300

For CHEMTREC assistance, call: 800-424-9300

Section 2 - Hazards Identification

GHS Classifications Category

H290-Corrosive to metals: 1

H303-Acute toxicity, oral: 5

H314-Skin corrosion/irritation: 1A

H317-Sensitisation, skin: 1

H318-Serious eye damage/eye irritation: 1

H332-Acute toxicity, inhalation: 4

H334-Sensitisation, respiratory: 1

H335-Specific target organ toxicity, single exposure; Respiratory tract irritation: 3

H340-Germ cell mutagenicity: 1B

H350-Carcinogenicity: 1B

H360-Reproductive toxicity: 1B

H372-Specific target organ toxicity, repeated exposure: 1

H402-Hazardous to the aquatic environment, acute hazard: 3

H412-Hazardous to the aquatic environment, long-term hazard: 3

Pictogram or Hazard Symbols and Hazard Statement(s):



Signal Word: Danger

Hazard Statements:

H290-May be corrosive to metals
H303-May be harmful if swallowed
H314-Causes severe skin burns and eye damage
H317-May cause an allergic skin reaction
H318-Causes serious eye damage
H332-Harmful if inhaled
H334-May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335-May cause respiratory irritation
H340-May cause genetic defects
H350-May cause cancer
H360-May damage fertility or the unborn child
H372-Causes damage to organs through prolonged or repeated exposure (target organs: respiratory system, cardiovascular system, kidney, liver, and blood)
H402-Harmful to aquatic life
H412-Harmful to aquatic life with long lasting effects

Precautionary Statements:

P201-Obtain special instructions before use.
P202-Do not handle until all safety precautions have been read and understood.
P234-Keep only in original packaging.
P260-Do not breathe dust/fume/gas/mist/vapours/spray.
P261-Avoid breathing dust/fume/gas/mist/vapours/spray.
P264-Wash thoroughly after handling.
P270-Do not eat, drink, or smoke when using this product.
P271-Use only outdoors or in a well-ventilated area.
P272-Contaminated work clothing should not be allowed out of the workplace.
P273-Avoid release to the environment.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
P284-In case of inadequate ventilation wear respiratory protection.
P301+P312-If swallowed: Call a Poison Center/doctor if you feel unwell.
P301+P330+P331-If swallowed: Rinse mouth. Do not induce vomiting.
P302+P352-If on skin: Wash with plenty of soap and water.
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.
P310-Immediately call a Poison Center/doctor.
P312-Call a Poison Center/doctor if you feel unwell.
P314-Get medical advice/attention if you feel unwell.
P333+P313-If skin irritation or rash occurs: Get medical advice/attention.
P342+P311-If experiencing respiratory symptoms: Call a Poison Center/doctor.
P362+P364-Take off contaminated clothing and wash it before reuse.
P363-Wash contaminated clothing before reuse.
P390-Avoid spillage to prevent material damage.
P403+P233-Store in a well-ventilated place. Keep container tightly closed.
P405-Store locked up.
P406-Store in a corrosion resistant container with a resistant inner liner.
P501-Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent
7778-50-9	Potassium Dichromate	2.5 w/v
64-19-7	Glacial Acetic Acid	5.0 v/v
7732-18-5	Water	Balance

Section 4 - First Aid Measures

Eye Exposure: In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek immediate medical attention.

Dermal Exposure: In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Seek medical attention.

Oral Exposure: If swallowed, seek immediate medical advice. Do NOT induce vomiting. Rinse mouth with water.

Inhalation Exposure: If inhaled, remove to fresh air. Seek immediate medical attention.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Use dry chemical, carbon dioxide, dry sand, water spray, or alcohol-resistant foam.

Hazardous Combustion Products: Carbon oxides, chromium oxides, potassium oxides, irritating and toxic fumes and gases.

Flash Point: Not available

Autoignition Temperature: Not available

Explosion Limits, Lower: Not available

Upper: Not available

NFPA Rating: (estimated) Health: 3; Flammability: 0; Instability: 0

Note: Do not allow this material to dry out. When dried from aqueous solution, remaining solids will have oxidizing properties and should be kept away from flammables or combustibles.

Section 6 - Accidental Release Measures

Procedure(s) of Personal Precaution(s):

Wear personal protective equipment. Do not ingest or inhale. Do not get on skin or clothing. Do not get in eyes. Ensure adequate ventilation. Keep away from heat.

Methods for Cleaning up: Absorb with sand, earth, or vermiculite. Carefully sweep up and containerize for proper disposal. Do not release to the environment. Do not release to drains.

Section 7 - Handling and Storage

Use care when handling. Wear personal protective equipment. Wash thoroughly after handling. Ensure adequate ventilation. Use only under a chemical hood. Avoid contact with eyes, skin, and clothing. Do not ingest. Do not breathe vapors/mist. Keep in a tightly closed and non-metal container. Store in a cool, dry, and well-ventilated area. Keep away from clothing and other combustible materials. Keep away from incompatible materials.

Note: Do not allow this material to dry out. When dried from aqueous solution, remaining solids will have oxidizing properties and should kept away from flammables or combustibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits:

Chemical Name	ACGIH - TLV	NIOSH - IDLH	OSHA - Final PELs
Potassium Dichromate CAS#7778-50-9	0.0002 mg/m3 TWA 0.0005 mg/m3 Skin STEL	0.0002 mg/m3 TWA 15 mg/m3 IDLH	0.1 mg/m3 Ceiling
Glacial Acetic Acid CAS#64-19-7	10 ppm TWA 15 ppm STEL	10 ppm TWA 25 mg/m3 TWA 15 ppm STEL 37 mg/m3 STEL 50 ppm IDLH	10 ppm TWA 25 mg/m3 TWA

OSHA Vacated PELs: Potassium Dichromate: 0.1 mg/m3 Ceiling
 Glacial Acetic Acid: 10 ppm TWA; 25 mg/m3 TWA

Section 9 - Physical and Chemical Properties
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Physical State: Liquid
Appearance: Orange
Odor: Slight vinegar-like
Vapor Pressure: Not available
Odor Threshold: Not available
Vapor Density: Not available
pH: Approx. 2.40
Relative Density: Not available
Melting point/freezing point: Not available
Solubility: Soluble in water
Boiling Point: Not available
Flash Point: Not available
Evaporation Rate: Not available
Flammability (solid, gas): Not applicable
Partition coefficient: n-octanol/water: Not available
Autoignition Temperature: Not available
Decomposition Temperature: Not available
Viscosity: Not available
Specific Gravity/Density: Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, ignition sources, and excess heat.
Incompatibilities with Other Materials: Strong oxidizing agents, reducing agents, strong bases, acids, acid anhydrides, metals, chromic acid, ethylene glycol, perchloric acid, nitric acid, phosphorous trichloride, oxidizers, sodium peroxide, strong caustics, carbonates, hydroxides, oxides, phosphates, organic material, combustible material, hydrocarbons.
Hazardous Decomposition Products: Carbon oxides, chromium oxides, potassium oxides, irritating and toxic fumes and gases.

Note: Do not allow this material to dry out. When dried from aqueous solution, remaining solids will have oxidizing properties and should be kept away from flammables or combustibles.

Section 11 - Toxicological Information

CAS#7778-50-9 Potassium Dichromate: RTECS#: HX7680000

LD50 Oral: 90.5 mg/kg (rat)

LD50 Dermal: 1150 mg/kg (rabbit)

LC50 Inhalation: 0.09 mg/L 4h (rat)

Carcinogenicity: Potassium Dichromate CAS#7778-50-9 is not listed by OSHA. Potassium Dichromate is listed by IARC (Group 1, Carcinogenic to Humans), NTP (Known Carcinogen), ACGIH (A1, Known Human Carcinogen), and California Prop. 65 as a carcinogen, developmental toxic, male reproductive toxin, female reproductive toxin.

CAS#64-19-7 Glacial Acetic Acid: RTECS#: AF1225000

LD50 Oral: 3310 mg/kg (rat)

LD50 Dermal: 1060 mg/kg (rabbit)

LC50 Inhalation: 11.4 mg/L 4h (rat)

Investigated as a mutagen, reproductive effector.

Skin corrosion/irritation: skin (rabbit), causes severe burns.

Serious eye damage/eye irritation: eyes (rabbit), corrosive to eyes, and causes serious eye damage.

Carcinogenicity: Glacial Acetic Acid CAS#64-19-7 is not listed by IARC, NTP, ACGIH, OSHA, or California Prop. 65.

Note: Acetic acid is extremely destructive to all body tissue. In concentrated form (glacial acetic acid), it is corrosive and flammable. Inhalation of concentrated vapors may cause serious damage to the lining of the nose, throat, and lungs. Breathing difficulties may occur. Ingestion of concentrated acetic acid causes severe swelling, severe damage to the tissue, and danger of perforation. Contact with concentrated acetic acid may cause severe eye damage followed by loss of sight. Exposure to vapor may cause intense watering and irritation to eyes.

Information on the likely routes of exposure: Routes of entry anticipated: oral, dermal, inhalation, and eye.

Epidemiology: Not available.

Teratogenicity: May cause harm to the unborn child (Potassium Dichromate).

Reproductive Effects: May damage fertility or the unborn child (Potassium Dichromate).

Developmental Effects: Component substance is listed on California Prop. 65 as a developmental hazard.

Neurotoxicity: Not available.

Mutagenicity: May cause genetic defects (Potassium Dichromate).

Specific Target Organ Toxicity, Single Exposure: Respiratory system.

Specific Target Organ Toxicity, Repeated Exposure: Respiratory system, cardiovascular system, kidney, liver, and blood.

Symptoms associated with exposure: Destructive to the tissue of the mucous membranes, respiratory tract, eyes, skin. Skin contact may cause burns, redness, pain, blisters, and/or an allergic skin reaction. Eye contact may cause serious eye damage, pain, irritation, redness, watering, blurred vision. If inhaled, may cause breathing difficulties, allergy/asthma symptoms, coughing, headache, dizziness. Ingestion may irritate and burn

mucous membranes and cause pain, vomiting, diarrhea, nausea, swelling, tissue damage. May cause cancer. May cause genetic defects. May damage fertility or the unborn child.

The toxicological properties of this material have not been thoroughly investigated.

Section 12 - Ecological Information

Ecotoxicity: Do not release to the environment. Do not release to drains. Harmful to aquatic life with long lasting effects.

CAS#7778-50-9 Potassium Dichromate:

LC50, freshwater fish: 14-20.9 mg/L 96h (pimephales promelas)(fathead minnow)
LC50, freshwater fish: 58.5 mg/L 96h (danio rerio)(zebra fish)
LC50, freshwater fish: >139 mg/L 96h static (cyprinus carpio)(carp)
LC50, freshwater fish: 12.3 mg/L 96h semi-static (oncorhynchus mykiss)(rainbow trout)
ErC50, algae: 0.233 mg/L 72h static (selenastrum capricornutum)(green algae)
EC50, water flea: 0.035 mg/L 48h (daphnia magna)

CAS#64-19-7 Glacial Acetic Acid:

LC50, freshwater fish: 88 mg/L 96h (pimephales promelas)(fathead minnow)
LC50, freshwater fish: 75 mg/L 96h (lepomis macrochirus)(bluegill)
EC50, waterflea: 95 mg/L 24h
EC50, microtox: 8.8 mg/L 5min (photobacterium phosphoreum)

Persistence and degradability: Not available.

Bio-accumulative potential: Not available.

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

Section 13 - Disposal Considerations

DISPOSAL: Dispose of in accordance with all federal, state, and local regulations.

Section 14 - Transport Information

DOT

Non-Regulated

Section 15 - Regulatory Information

Canada Regulatory Information

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.

Section 16 - Additional Information

SDS Creation Date: 1-24-24

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