1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Potassium chromate
Product Number : 216615
Brand : Sigma-Aldrich
Supplier : Sigma-Aldrich
            3050 Spruce Street
            SAINT LOUIS MO  63103
            USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555
Preparation Information : Sigma-Aldrich Corporation
            Product Safety - Americas Region
            1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Carcinogen, Target Organ Effect, Toxic by ingestion, Skin sensitizer, Irritant, Mutagen

Target Organs
Lungs, Kidney, Liver, Blood, Skin, Eyes

GHS Classification
Acute toxicity, Oral (Category 3)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Skin sensitization (Category 1)
Germ cell mutagenicity (Category 1B)
Carcinogenicity (Category 1B)
Specific target organ toxicity - single exposure (Category 3)
Acute aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word : Danger

Hazard statement(s)
H301  Toxic if swallowed.
H315  Causes skin irritation.
H317  May cause an allergic skin reaction.
H319  Causes serious eye irritation.
H335  May cause respiratory irritation.
H340  May cause genetic defects.
H350  May cause cancer.
H400  Very toxic to aquatic life.
Precautionary statement(s)
P201 Obtain special instructions before use.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
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.

HMIS Classification
- Health hazard: 2
- Chronic Health Hazard: *
- Flammability: 0
- Physical hazards: 0

NFPA Rating
- Health hazard: 2
- Fire: 0
- Reactivity Hazard: 0

Potential Health Effects
- Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
- Skin: May be harmful if absorbed through skin. Causes skin irritation.
- Eyes: Causes eye irritation.
- Ingestion: Toxic if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: CrK₂O₄
Molecular Weight: 194.19 g/mol

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium chromate</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>7789-00-6</td>
</tr>
<tr>
<td>EC-No.</td>
<td>232-140-5</td>
</tr>
<tr>
<td>Index-No.</td>
<td>024-006-00-8</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

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

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Potassium oxides, Chromium oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>See 1910.1026. See Table Z-2 for the exposure limit for any operations or sectors where the exposure limit in 1910.1026 is stayed or otherwise not in effect.</td>
</tr>
<tr>
<td>Substance listed; for more information see OSHA document 1910.1026</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium chromate</td>
<td>7789-00-6</td>
<td>CEIL</td>
<td>1mg/10m3</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z2</td>
<td>Z37.7-1971 This standard applies to any operations or sectors for which the exposure limit in the Chromium (VI) standard, Sec. 1910.1026, is stayed or is otherwise not in effect.</td>
</tr>
<tr>
<td>See 1910.1026. See Table Z-2 for the exposure limit for any operations or sectors where the exposure limit in 1910.1026 is stayed or otherwise not in effect.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWA</td>
<td></td>
<td>0.001 mg/m3</td>
<td>USA. NIOSH Recommended Exposure Limits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential Occupational Carcinogen</td>
<td>See Appendix C</td>
<td>See Appendix A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Full contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 480 min
Material tested: Dermatril® (Aldrich Z677272, Size M)

Splash protection
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: > 30 min
Material tested: Dermatril® (Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form solid
Colour yellow

Safety data
pH 8.5 - 10.0 at 50 g/l at 20 °C (68 °F)
Melting point/freezing point Melting point/range: 971 °C (1,780 °F) - lit.
Boiling point no data available
Flash point not applicable
Ignition temperature no data available
Autoignition temperature no data available
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure no data available
Density 2.730 g/cm3
Water solubility no data available
Partition coefficient: n-octanol/water no data available
Relative vapour density no data available
Odour no data available
Odour Threshold no data available
Evaporation rate no data available
10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
no data available

**Conditions to avoid**
no data available

**Materials to avoid**
Organic materials, Powdered metals, Strong oxidizing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Potassium oxides, Chromium oxides
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Oral LD50**
LD50 Oral - mouse - 180 mg/kg

**Inhalation LC50**

**Dermal LD50**
no data available

**Other information on acute toxicity**
no data available

**Skin corrosion/irritation**
no data available

**Serious eye damage/eye irritation**
no data available

**Respiratory or skin sensitization**
May cause allergic skin reaction.

**Germ cell mutagenicity**
May alter genetic material.
In vivo tests showed mutagenic effects

**Carcinogenicity**
This is or contains a component that has been reported to be carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.
Possible human carcinogen

IARC: 1 - Group 1: Carcinogenic to humans (Potassium chromate)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Potassium chromate)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity**
no data available

**Teratogenicity**

no data available

**Specific target organ toxicity - single exposure (Globally Harmonized System)**
May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure (Globally Harmonized System)**
no data available

**Aspiration hazard**
no data available

**Potential health effects**

- **Inhalation**
  May be harmful if inhaled. Causes respiratory tract irritation.

- **Ingestion**
  Toxic if swallowed.

- **Skin**
  May be harmful if absorbed through skin. Causes skin irritation.

- **Eyes**
  Causes eye irritation.

**Synergistic effects**
no data available

**Additional Information**
RTECS: GB2940000

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### 12. ECOLOGICAL INFORMATION

**Toxicity**

- **Toxicity to fish**
  LC50 - *Pimephales promelas* (fathead minnow) - 40 mg/l - 96.0 h

- **Toxicity to daphnia and other aquatic invertebrates**
  EC50 - *Daphnia magna* (Water flea) - 15 mg/l - 48 h

- **Toxicity to algae**
  EC50 - *Nitzschia sp.* - 0.26 mg/l - 72 h

**Persistence and degradability**
no data available

**Bioaccumulative potential**
no data available

**Mobility in soil**
no data available

**PBT and vPvB assessment**
no data available

**Other adverse effects**
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

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### 13. DISPOSAL CONSIDERATIONS

**Product**
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 3288    Class: 6.1    Packing group: III
Proper shipping name: Toxic solid, inorganic, n.o.s. (Potassium chromate)
Reportable Quantity (RQ): 10 lbs
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 3288    Class: 6.1    Packing group: III    EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, INORGANIC, N.O.S. (Potassium chromate)
Marine pollutant: No

IATA
UN number: 3288    Class: 6.1    Packing group: III
Proper shipping name: Toxic solid, inorganic, n.o.s. (Potassium chromate)

15. REGULATORY INFORMATION

OSHA Hazards
Carcinogen, Target Organ Effect, Toxic by ingestion, Skin sensitiser, Irritant, Mutagen

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Revision Date</th>
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<td>7789-00-6</td>
<td>1993-04-24</td>
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SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

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Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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California Prop. 65 Components
WARNING! This product contains a chemical known to the State of California to cause cancer.

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California Prop. 65 Components
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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16. OTHER INFORMATION

Further information
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