1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>Product name</th>
<th>Lead (II) chromate</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS #</td>
<td>7758-97-6</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Sentury Reagents, Inc.</td>
</tr>
<tr>
<td></td>
<td>2515 Commerce Dr.</td>
</tr>
<tr>
<td></td>
<td>Rock Hill, SC 29730</td>
</tr>
<tr>
<td>Telephone</td>
<td>803-327-6880</td>
</tr>
<tr>
<td>Fax</td>
<td>803-327-3872</td>
</tr>
<tr>
<td>Emergency Phone #</td>
<td>PERS 800-633-8253</td>
</tr>
<tr>
<td>International Phone #</td>
<td>011-801-629-0667</td>
</tr>
<tr>
<td>Account</td>
<td>10613</td>
</tr>
</tbody>
</table>

2. HAZARDS IDENTIFICATION

**OSHA Hazards**
Carcinogen, Target Organ Effect, Teratogen

**Target Organs**
Lungs, Blood, Kidney, Nerves., Female reproductive system., Male reproductive system.

**GHS Classification**
Carcinogenicity (Category 1A)
Reproductive toxicity (Category 1A)
Specific target organ toxicity - repeated exposure (Category 2)
Acute aquatic toxicity (Category 1)
Chronic aquatic toxicity (Category 2)

**GH3 Label elements, including precautionary statements**

**Pictogram**

**Signal word**  DANGER

**Hazard statement(s)**
- H350 May cause cancer.
- H360 May damage fertility or the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

**Precautionary statement(s)**
- P201 Obtain special instructions before use.
- P202 Do not handle until all safety regulations have been read and understood.
- P273 Avoid release to the environment.
- P280 Wear protective clothing, gloves, eye & face protection and respiratory protection.
- P308 + P313 IF exposed or concerned: Get medical advice/ attention.
- P501 Dispose of in accordance with all applicable regulations.
HMIS Classification

<table>
<thead>
<tr>
<th>HMIS Classification</th>
<th>NFPA Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health hazard:</td>
<td>3</td>
</tr>
<tr>
<td>Flammability:</td>
<td>0</td>
</tr>
<tr>
<td>Physical hazards:</td>
<td>3</td>
</tr>
<tr>
<td>Personal protection:</td>
<td>E</td>
</tr>
</tbody>
</table>

Health hazard: 3

Flammability: 0

Physical hazards: 3

Reactivity hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May cause eye irritation.

Eyes: May be harmful if swallowed.

Ingestion: May be harmful if ingested.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula: CrO₄Pb

Molecular Weight: 323.19 g/mol

Component | Concentration
---|---
Lead chromate Included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH) | ≥92%

CAS-No. | 7758-97-6
EC-No.  | 231-846-0
Index-No. | 082-004-00-2

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. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

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

5. FIRE-FIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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. - Lead oxides, Chromium oxides

Further information
The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. 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. Keep in a dry 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>
</tr>
</thead>
<tbody>
<tr>
<td>Lead chromate</td>
<td>7758-97-6</td>
<td>TWA</td>
<td>0.012 mg/m³</td>
<td>USA, ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

**Remarks**
Male reproductive damage Teratogenic effects Vasoconstriction Substances for which there is a Biological Exposure Index or Indices (see BE® section) Suspected human carcinogen

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWA</td>
<td>0.05 mg/m³</td>
<td>USA, ACGIH Threshold Limit Values (TLV)</td>
<td></td>
</tr>
</tbody>
</table>

Male reproductive damage Teratogenic effects Vasoconstriction Substances for which there is a Biological Exposure Index or Indices (see BE® section) Suspected human carcinogen

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
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<tbody>
<tr>
<td>TWA</td>
<td>0.0050 mg/m³</td>
<td>USA, Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
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<tr>
<td>CEIL</td>
<td>0.0010 mg/m³</td>
<td>USA, Occupational Exposure Limits (OSHA) - Table Z2</td>
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</tr>
<tr>
<td>CEIL</td>
<td>0.1 mg/m³</td>
<td>USA, OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</td>
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<tr>
<td>TWA</td>
<td>0.075 mg/m³</td>
<td>USA, OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000</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.

**Eye protection**
Safety glasses with side-shields conforming to EN166 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**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: powder
- Colour: orange yellow

**Safety data**
- pH: no data available
- Melting point: 844°C
- Freezing point: no data available
- 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: 6.300 g/cm³
- Water solubility: Negligible
- Partition coefficient: n-octanol/ 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

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

11. TOXICOLOGICAL INFORMATION

**Acute toxicity**
- Oral LD50
  LD50 Oral - mouse - > 12,000 mg/kg
- Inhalation LC50
  no data available
- 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**
no data available

**Germ cell mutagenicity**
Carcinogenicity

Carcinogenicity - rat - Intramuscular

Carcinogenicity - rat - Subcutaneous
Tumorigenic: Neoplastic by RTECS criteria. Tumorigenic: Tumors at site or application.

Carcinogenicity - rat - Subcutaneous
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Tumorigenic: Tumors at site or application. Human carcinogen.

IARC: 1 - Group 1: Carcinogenic to humans (Lead chromate)
2A - Group 2A: Probably carcinogenic to humans. Re-evaluation of inorganic lead compounds, IARC Monograph (Vol. 87) (February 2004) (Lead chromate)
1 - Group 1: Carcinogenic to humans (Lead chromate)
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NTP: Known to be human carcinogen (Lead chromate)
Reasonably anticipated to be a human carcinogen (Lead chromate)
Reasonably anticipated to be a human carcinogen. The reference note has been added by TD based on the background information of the NTP. (Lead chromate)

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Reasonably anticipated to be a human carcinogen (Lead chromate)
Reasonably anticipated to be a human carcinogen. The reference note has been added by TD based on the background information of the NTP. (Lead chromate)

OSHA: 1910.1025 (Lead chromate)
1910.1026 (Lead chromate)

Reproductive toxicity
no data available

Teratogenicity
Known human reproductive toxicant

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

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
May cause damage to organs through prolonged or repeated exposure. no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

Signs and Symptoms of Exposure
Lead salts have been reported to cross the placenta and to induce embryo- and feto- mortality. They also have teratogenic effect in some animal species. No teratogenic effects have been reported with exposure to organometallic lead compounds. Adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal (e.g., mental) development have been reported. Excessive exposure can affect blood, nervous, and digestive systems. The synthesis of hemoglobin is inhibited and results in anemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: GB2975000

12. ECOLOGICAL INFORMATION

Toxicity
Persistence and degradability
Bioaccumulative potential
Mobility in soil
PBT and vPvB assessment
Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

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) UN3288 Toxic Solid, Inorganic, n.o.s., (Lead Chromate), Class 6.1, Packing Group III
IMDG UN3288 Toxic Solid, Inorganic, n.o.s., (Lead Chromate), Class 6.1, Packing Group III
IATA UN3288 Toxic Solid, Inorganic, n.o.s., (Lead Chromate), Class 6.1, Packing Group III

15. REGULATORY INFORMATION

OSHA Hazards
Carcinogen, Target Organ Effect, Teratogen

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>
</tr>
</thead>
<tbody>
<tr>
<td>Lead Chromate</td>
<td>7758-97-6</td>
<td>1993-04-24</td>
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<tr>
<td>SARA 311/312 Hazards</td>
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<tr>
<td>Chronic Health Hazard</td>
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<tr>
<td>Massachusetts Right To Know Components</td>
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<tr>
<td>Lead Chromate</td>
<td>7758-97-6</td>
<td>1993-04-24</td>
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<tr>
<td>Pennsylvania Right To Know Components</td>
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<tr>
<td>Lead Chromate</td>
<td>7758-97-6</td>
<td>1993-04-24</td>
</tr>
<tr>
<td>New Jersey Right To Know Components</td>
<td></td>
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</table>
16. OTHER INFORMATION

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sentury Reagents, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product.