Material Safety Data Sheet
Lead chromate

MSDS# 12580

Section 1 - Chemical Product and Company Identification

MSDS Name: Lead chromate
Catalog Numbers: AC612381000, L63-100, L65-100
Synonyms: Chromic acid, lead(2+) salt; Chrome green; Chrome yellow.

Company Identification:
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call:
201-796-7100
Emergency Number US:
201-796-7100
CHEMTREC Phone Number, US:
800-424-9300

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>7758-97-6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name:</td>
<td>Lead chromate</td>
</tr>
<tr>
<td>%:</td>
<td>100</td>
</tr>
<tr>
<td>EINECS#:</td>
<td>231-846-0</td>
</tr>
</tbody>
</table>

Hazard Symbols: T N
Risk Phrases: 61 33 40 50/53 62

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Strong oxidizer. Contact with other material may cause a fire. Dangerous for the environment. May cause kidney damage. May cause central nervous system effects. Cancer hazard. Possible risk of impaired fertility. May cause harm to the unborn child. Causes eye, skin, and respiratory tract irritation. Target Organs: Kidneys, central nervous system, lungs, blood forming organs, reproductive system, nerves.

Potential Health Effects

Eye: Causes eye irritation.
Skin: Causes skin irritation.
Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea.
Inhalation: Causes respiratory tract irritation. May cause effects similar to those described for ingestion.
Chronic: May cause cancer in humans. Repeated exposure may cause sensitization dermatitis. Chronic exposure to lead may result in plumbism which is characterized by lead line in gum, headache, muscle weakness, mental changes. Laboratory experiments have resulted in mutagenic effects. Lead salts have been reported to cross the placenta and induce embryo- and feto- mortality.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything
Ingestion: by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: Persons with asthma, allergies, and known sensitization to chromic acid or chromates may be at increased risk from exposure to this product. Treat symptomatically and supportively.

Antidote: The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel. The use of Calcium disodium EDTA as a chelating agent should be determined by qualified medical personnel. The use of Dimercaprol or BAL (British Anti-Lewisite) as a chelating agent should be determined by qualified medical personnel.

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. Combustion generates toxic fumes. Oxidizer. Greatly increases the burning rate of combustible materials. May accelerate burning if involved in a fire.

Extinguishing Media: Use water only! Cool containers with flooding quantities of water until well after fire is out. For large fires, flood fire area with water from a distance. Do NOT use dry chemicals, CO2, Halon or foams.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Not available

NFPA Rating: ; instability: OX

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Avoid generating dusty conditions. Provide ventilation. With a clean shovel, carefully pick up the material and place it into a clean dry container and cover for disposal. Keep combustibles (wood, paper, oil, etc.,) away from spilled material.

Spills/Leaks: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Empty Handling: containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid ingestion and inhalation. Keep from contact with clothing and other combustible materials. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Do not store near combustible materials. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead chromate</td>
<td>0.012 mg/m³ (as Cr); 0.05 mg/m³ (as Pb)</td>
<td>0.050 mg/m³ TWA (as Pb) (listed)</td>
<td>50 μg/m³ TWA (as Pb) (listed)</td>
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<tr>
<td></td>
<td></td>
<td>under Lead</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Cr compounds .001</td>
<td>under Lead,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mg/m³ TWA (as compounds) .5</td>
<td>under Lead,</td>
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<tr>
<td></td>
<td></td>
<td>Cr (listed)</td>
<td>under Lead,</td>
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<tr>
<td></td>
<td></td>
<td>ag/m³ TWA</td>
<td>under Lead,</td>
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<td></td>
<td></td>
<td></td>
<td>(listed under</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Chromates) .100</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>mg/m³ IDLH (as compounds) .1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pb (listed)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>mg/m³ TWA (as Cr) (listed)</td>
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<td>under Lead</td>
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<td>Cr (listed)</td>
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<td></td>
<td>mg/m³ IDLH (as</td>
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<td></td>
<td></td>
<td>Cr(VI)) (listed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>salts) .01 mg/m³</td>
</tr>
</tbody>
</table>
OSHA Vacated PELs: Lead chromate: None listed

Engineering Controls:

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.

Exposure Limits

Personal Protective Equipment

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eyes:</td>
<td>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.</td>
</tr>
<tr>
<td>Skin:</td>
<td>Wear appropriate protective gloves to prevent skin exposure.</td>
</tr>
<tr>
<td>Clothing:</td>
<td>Wear appropriate protective clothing to prevent skin exposure.</td>
</tr>
<tr>
<td>Respirators:</td>
<td>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 respirator use.</td>
</tr>
</tbody>
</table>

Section 9 - Physical and Chemical Properties

Physical State: Crystals
- Color: yellow to yellow-orange
- Odor: none reported
- pH: Not available
- Vapor Pressure: Not applicable.
- Vapor Density: Not available
- Evaporation Rate: Not applicable.
- Viscosity: Not applicable.
- Boiling Point: decomposition
- Freezing/Melting Point: 844 deg C (1,551.20°F)
- Decomposition Temperature: Not available
- Solubility in water: Insoluble
- Specific Gravity/Density: 6.123
- Molecular Formula: PbCrO4
- Molecular Weight: 323.1936

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Dust generation, excess heat.
Incompatibilities with Other Materials: Reducing agents, active metals, hydrazine, potassium, hydrogen peroxide, sodium, azodye stuffs (e.g. dinitroaniline orange and chlorinated para red), sulfur tantalum, iron (III) hexacyanoferrate (4-).
Hazardous Decomposition Products: Iron (III) hexacyanoferrate (4-), lead/lead oxides.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 7758-97-6: GB2975000
RTECS:
LD50/LC50: CAS# 7758-97-6: Oral, mouse: LD50 = >12 gm/kg;

Lead chromate - ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
Carcinogenicity: (Lead, inorganic compounds). California: carcinogen, initial date 2/27/87 (Chromium (VI) compounds).
NTP: Suspect carcinogen (Lead compounds). IARC: Group 1 carcinogen
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Not available
Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: OXIDIZING SOLID, N.O.S.
Hazard Class: 5.1
UN Number: UN1479
Packing Group: II
Canada TDG
Shipping Name: CORROSIVE SOLID NOS (LEAD CHROMATE)
Hazard Class: 8
UN Number: UN1759
Packing Group: II

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T N
Risk Phrases:
R 61 May cause harm to the unborn child.
R 33 Danger of cumulative effects.
R 40 Limited evidence of a carcinogenic effect.
R 50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 62 Possible risk of impaired fertility.

Safety Phrases:
S 53 Avoid exposure - obtain special instructions before use.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 60 This material and its container must be disposed of as hazardous waste.
S 61 Avoid release to the environment. Refer to special instructions/safety data sheets.

WGK (Water Danger/Protection)

CAS# 7758-97-6: Not available

Canada

CAS# 7758-97-6 is listed on Canada's DSL List
Canadian WHMIS Classifications: D2A, E
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
CAS# 7758-97-6 is listed on Canada's Ingredient Disclosure List

US Federal

TSCA

CAS# 7758-97-6 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 6/28/1999
Revision #6 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantibility or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make
their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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