Material Safety Data Sheet
Lead chromate

Section 1 - Chemical Product and Company Identification

MSDS Name: Lead chromate
Synonyms: Chromic acid, lead(2+) salt; Chrome green; Chrome yellow.

Section 2 - Composition, Information on Ingredients

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

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: yellow to yellow-orange crystals.

**Danger!** Strong oxidizer. Contact with other material may cause a fire. Cancer hazard. May cause harm to the unborn child. Causes eye, skin, and respiratory tract irritation. May cause central nervous system effects. May cause kidney damage. Dangerous for the environment. Possible risk of impaired fertility.

**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. Many lead compounds can cause toxic effects in the blood-forming organs, kidneys and central nervous system.

**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.

**Ingestion:** Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything 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 know 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.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not applicable.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 3; Instability: 0; Special Hazard: OX

Section 6 - Accidental Release Measures

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

**Spills/Leaks:** 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.

Section 7 - Handling and Storage

**Handling:** 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 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

**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**

<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 TWA (as Cr); 0.05 mg/m3 TWA (as Pb)</td>
<td>0.050 mg/m3 TWA (as Pb) (listed under Lead compounds).0.001 mg/m3 TWA (as Cr) (listed under Chromates).15 mg/m3 IDLH (as Cr(VI)) (listed under Chromates).</td>
<td>1 mg/m3 TWA (as Cr) (listed under Lead chromate).0.1 mg/m3 Ceiling (listed under Chromates).50 æg/m3 TWA (as Pb); 30 æg/m3 Action Level (as Pb. Poison - see 29 CFR 1910.10 25) (listed under Lead, inorganic compounds).</td>
</tr>
</tbody>
</table>

**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.
**Section 9 - Physical and Chemical Properties**

**Physical State:** Crystals  
**Appearance:** 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  
**Decomposition Temperature:** Not available.  
**Solubility:** 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), aluminum + dinitronaphthalene, sulfur tantalum, iron (III) hexacyanoferrate (4-).  
**Hazardous Decomposition Products:** Irritating and toxic fumes and gases, lead/lead oxides.  
**Hazardous Polymerization:** Has not been reported.

**Section 11 - Toxicological Information**

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

**Carcinogenicity:**  
**CAS# 7758-97-6:**  
  - ACGIH: A2 - Suspected Human Carcinogen; A2 - Suspected Human Carcinogen
• California: carcinogen, initial date 2/27/87 (listed as Chromium (VI) compounds).
• NTP: Suspect carcinogen (listed as Lead compounds).
• IARC: Group 1 carcinogen (listed as Chromium (VI) compounds).

**Epidemiology:** Subcutaneous, rat: TDLo = 135 mg/kg (Tumorigenic - neoplastic by RTECS criteria - tumors at site of application); Intramuscular, rat: TDLo = 324 mg/kg/39W-I (Tumorigenic - neoplastic by RTECS criteria - Kidney, Ureter, Bladder - Kidney tumors and tumors at site of application).

**Teratogenicity:** No information found

**Reproductive Effects:** No information found


**Neurotoxicity:** Repeated exposure to lead has caused neurological changes.

**Other Studies:**

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**Section 12 - Ecological Information**

**Ecotoxicity:** No data available. Chromium in soil can be transported to the atmosphere by way of aerosol formation. Chromium is also transported from soil through runoff and leaching of water. Runoff could remove both chromium ions and bulk precipitates of chromium, with final deposition on either a different land area or a water body. Leaching of lead can be relatively rapid from some soils, especially at highly contaminated sites or landfills.

**Environmental:** Chromium is removed from air through wet and dry depositions. Terrestrial Fate: Lead in soil is relatively immobile and can persist for long periods of time, whether added to the soil as halides, hydroxides, oxides, carbonates or sulfates.

**Physical:** No information available.

**Other:** No information available.

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**Section 13 - Disposal Considerations**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.
**RCRA U-Series:** None listed.

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**Section 14 - Transport Information**

<table>
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<tr>
<th>IATA</th>
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<tbody>
<tr>
<td><strong>Shipping Name:</strong></td>
<td>OXIDIZING SOLID, N.O.S.</td>
</tr>
<tr>
<td><strong>Hazard Class:</strong></td>
<td>5.1</td>
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<tr>
<td><strong>UN Number:</strong></td>
<td>UN1479</td>
</tr>
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</table>
Packing Group: II

Section 15 - Regulatory Information

Hazard Symbols:
T N

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

Safety Phrases:
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 53 Avoid exposure - obtain special instructions before use.
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.

Section 16 - Additional Information

MSDS Creation Date: 6/28/1999
Revision #4 Date: 6/23/2004

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability 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 INDO GULF GROUP 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 INDO GULF GROUP has been advised of the possibility of such damages.