SODIUM CHROMATE, Tetrahydrate
MATERIAL SAFETY DATA SHEET

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MSDS Number: S328
Revision Date: 16-Apr-08
Revision No.: 005

Page 1

Product Identification

Product Name: SODIUM CHROMATE, Tetrahydrate
Synonyms: Chromic acid, sodium salt
Chemical Formula: Na2CrO4 4H2O
Formula Weight: 234.03
Chemical Family: Inorganic Salt
Integra Product Numbers: S328.10

Hazard Overview

HMIS Rating: 3-0-2-F NFPA Rating: NE
Warning Label: DANGER!
Strong oxidizer. Contact with flammable or combustible materials may cause fire or explosion. Harmful if swallowed or inhaled. Causes irritation. Do not allow contact with skin, eyes and clothing. Use only with adequate protective equipment. Cancer hazard. Use with due caution.

Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate, tetrahydrate</td>
<td>10034-82-9</td>
<td>100</td>
</tr>
</tbody>
</table>

Physical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>NA</td>
</tr>
<tr>
<td>Melting Point</td>
<td>792 °C</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.7</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>NA</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>NA</td>
</tr>
<tr>
<td>Water=1 Air = 1</td>
<td></td>
</tr>
</tbody>
</table>

Solubility: 50% in water.

Appearance and Odor: Bright yellow crystals. No odor.

Fire and Explosion Data

Flash Point: NA Test Method:
Auto-ignition Temperature: NA
Flammable Limits (% by volume in air): Upper: NA Lower: NA

Fire Extinguishing Media:
Material is not flammable. Use extinguishing media suitable to surrounding materials.

Special Firefighting Procedures:
Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.

Unusual Fire and Explosion Hazards:
Strong oxidizer. Contact with combustible or flammable materials can cause fire or explosion.

Health Hazard Information

Effects of Overexposure
Skin Contact:
May cause irritation, redness and ulcerations. Skin may become sensitized. Absorption through the skin may
Health Hazard Information

Effects of Overexposure

Skin Contact:
cause systemic poisoning with symptoms similar to ingestion.

Eye Contact:
Causes severe irritation. Redness, pain, blurred vision and possibly blindness may result.

Ingestion:
Harmful or fatal if swallowed. May cause abdominal pain, vomiting, diarrhea, dizziness, intense thirst, shock, and liver damage.

Inhalation:
Harmful if inhaled. Dusts are irritating to the mucous membranes and respiratory tract. Breathing may cause coughing, wheezing, fever, headache, and labored breathing.

Chronic Effects of Overexposure:
Prolonged or repeated exposure may cause dermatitis or "chrome sores". Prolonged inhalation of dusts or mists may cause ulceration and perforation of the nasal septum.

Exposure Limits:

<table>
<thead>
<tr>
<th>Component</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate, tetrahydrate</td>
<td>NE</td>
<td>NE</td>
<td>NE</td>
</tr>
<tr>
<td>Sodium chromate, tetrahydrate (as Cr)</td>
<td>0.05 mg/m3</td>
<td>NE</td>
<td>NE</td>
</tr>
</tbody>
</table>

Toxicity Data:

Sodium chromate, tetrahydrate
- LC50 (inhalation, rat) for anhydrous: 104 mg/m3/4H
- LD50 (skin, rabbit) for anhydrous: 1.8 g/kg
- LD50 (oral, rat) for anhydrous: 52 mg/kg

Medical Conditions Generally Aggravated by Exposure:
Skin and respiratory conditions.

Target Organs:
None Identified

Reproductive Effects:
None Identified

Carcinogenicity:
None Identified

<table>
<thead>
<tr>
<th>Component</th>
<th>NTP Listing</th>
<th>IARC Listing</th>
<th>OSHA Regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chromate, tetrahydrate</td>
<td>Group 1, Known Carcinogen</td>
<td>Group 1, Known Human Carcinogen</td>
<td></td>
</tr>
</tbody>
</table>

Emergency First Aid Procedures

Skin Contact:
Immediately remove contaminated clothing. Flush skin with water for at least 15 minutes. Seek immediate medical attention.

Eye Contact:
Immediately flush eyes with large amounts of water, holding lids apart to ensure rinsing of entire surface. Washing
Spill and Disposal Procedures

Spill and Leak Procedures:
- Remove all ignition sources. Sweep or scoop into disposal container in a manner that minimizes dust dispersion.
- Wear suitable protective equipment. Treat spill area with a reducing agent (sodium bisulfite, sodium sulfite, ferrous sulfate or ferrous chloride) to convert the hexavalent chromium into the trivalent form then neutralize with a weak base (such as sodium bicarbonate, soda ash or lime). Absorb neutralized residues and place in a suitable disposal container. Never flush spill residues to sewer.

Disposal Procedures:
- Dispose in accordance with all Local, State and Federal regulations.

Emergency First Aid Procedures

Eye Contact:
- eyes within several seconds of contact is essential to achieve maximum effectiveness. Get immediate medical attention.

Inhalation:
- Remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult administer oxygen. Seek medical attention.

Ingestion:
- Do not induce vomiting. If victim is conscious, give water. Never give anything by mouth to an unconscious person. Seek immediate medical attention. Give accident victims 5-10 g Ascorbic Acid dissolved in water.

Additional First Aid and Treatment Notes:
- Massive overexposure to solutions of sodium chromate could lead to kidney failure and death. Death has been avoided in several such cases through the use of early renal dialysis. It has been reported there is little value from chelating agents, however, ascorbic acid administered intravenously is an effective antidote in preventing renal failure. Skin ulcers may be treated by removal from exposure, daily cleaning and debridement, and application of antibiotic cream and dressing.

Reactivity Data

Stability:
- Stable

Hazardous Polymerization:
- Will Not Occur

Incompatibles:
- Reducing agents, organic materials, flammable or combustible materials.

Decomposition Products:
- Oxides of Chromium, Oxygen.

Conditions to Avoid:
- None identified

Spill and Disposal Procedures

Protective Equipment

Ventilation:
- Use general or local exhaust ventilation to meet TLV and PEL requirements.

Respiratory Protection:
- None required where adequate ventilation conditions exist. If airborne concentration exceeds PEL or TLV a dust/mist respirator is recommended.

Skin and Eye Protective Equipment:
### Protective Equipment

**Skin and Eye Protective Equipment:**
Safety goggles, protective clothing and gloves. Maintain an eyewash station and safety shower nearby.

### Storage and Handling Precautions

**Storage Area:** OXIDIZER
Store in a cool, dry, area dedicated to the storage of oxidizers. Store well away from flammable and combustible materials. Protect material from exposure to air and moisture.

### Transportation Information

- **Regulated Material domestic ground transportation**
  (reference: CFR Title 49, Transportation)
  - Proper Shipping Name: Toxic solid inorganic, nos (sodium chromate)
  - UN or NA Identification number: UN3288
  - Hazard Class and Label: 6.1
  - Packing Group: III
  - Subsidiary Risk and Label: Stow Away From Foodstuffs

- **Regulated Material via Air Transportation**
  (reference: ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air)
  - Proper Shipping Name: Toxic solid inorganic, nos (sodium chromate)
  - UN Identification Number: UN3288
  - Hazard Class and Label: 6.1
  - Toxic
  - Packing Group: III
  - Subsidiary Risk and Label:
  - Packing Instruction: Max net qty per package
    - Passenger Aircraft: 619/Y619
    - Cargo Aircraft: 619
    - 100/10 kg
    - 200 kg

### Regulatory Information

- **SARA**
  - Inventory: ✓
  - RQ: 10 lbs
  - TPQ: lbs
  - de minimus: 1.0 lbs

- **SARA 313 Toxic Release**
  - Clean Air Act Categories: ✓ SCMI HAP Volatile HAP Organic HAP Ozone Depleting

### MSDS Revision History:
- 002 - Changed header phone number
- 003 - Format revisions; updated header phone number
- 004 - Updated Product Identification
- 005 - Updated Header Information

NE = Not established, NA = Not applicable or Not available

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