

MATERIAL SAFETY DATA SHEET**I PRODUCT IDENTIFICATION**

Trade Name: Barium Chromate **Chemical Family:** Metal chromate
Formula: BaCrO₄ **CAS #:** 10294-40-3
Synonyms: Barium chromate (VI), barium chromate oxide, chromic acid barium salt.

II HAZARDOUS INGREDIENTS

Hazardous Components	%	OSHA/PEL	ACGIH/TLV	Sec. 302	Sec. 304	Sec. 313
Barium Chromate	0-100	.1 mg (CrO ₃)/m ³	.05 mg (Cr)/m ³	No	No	No
Barium	0-100	0.5 mg (Ba)/m ³	0.5 mg (Ba)/m ³	No	No	No

HMIS Rating: Health: 3 **Flammability:** 0 **Reactivity:** 2 **Protective Equipment:** J: goggles, gloves, apron, respirator.

III PHYSICAL DATA

Boiling Point: N/E or N/A **Specific Gravity (H₂O=1):** 4.98 gm
Melting Point: N/E or N/A **Vapor Pressure:** N/E
Vapor Density: N/A **Solubility in H₂O:** Insoluble
Appearance and Odor: Yellow powder and pieces, no odor. **% Volatile:** N/E or N/A

IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/E or N/A **Method Used:** Non-flammable
Explosive Limits: Lower: N/A **Upper:** N/A

Extinguishing Media: Use suitable extinguishing media for surrounding materials and type of fire.

Special Firefighting Procedures: Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards: When heated to decomposition, barium chromate may emit toxic fumes of barium and chromium. Barium chromate is considered an oxidizing agent which may accelerate combustion.

V HEALTH HAZARD INFORMATION**Effects of Exposure:**

To the best of our knowledge, the chemical, physical and toxicological properties of barium chromate have not been thoroughly investigated and reported.

Barium chromate is a human carcinogen. The soluble barium salts are poisonous when ingested. Chromate salts are suspected human carcinogens producing tumors of the lungs, nasal cavity and paranasal sinus. Chromic acid and its salts have a corrosive action on the skin and mucous membranes. The lesions are confine to the exposed parts, affecting chiefly the skin of the hands and forearms and the mucous membranes of the nasal septum.

Acute Effects: Hexavalent chromium compounds are irritants and corrosive.

Inhalation: May irritate the respiratory system and nasal septum. May cause inflammation and ulceration of the nasal mucosa and larynx. May cause acute barium poisoning.

Ingestion: Oral ingestion is toxic and may cause irritation to tissues. May cause acute barium poisoning.

Skin: Corrosive and strong irritant. Chromium compounds act allergens which cause dermatitis, that varies from erythematous to eczema to exposed limbs.

Eye: Corrosive and strong irritant. May cause irritation, eye injuries and conjunctivitis.

Chronic Effects:

Inhalation: Suspected carcinogen producing nasal cavity and paranasal sinus. Fine particles of chromium salts have been implicated as a cause of pulmonary cancer. May cause changes in the number of white blood cells and chronic barium poisoning. May produce pulmonary sensitization. Large doses may cause cardiac and respiratory failure.

Ingestion: Large doses of hexavalent chromium to rabbits in their diet have caused albuminuria with desquamated cells, kidneys showed hyperemia, fatty degeneration and necrosis. May cause chronic barium poisoning. Large doses may cause hemorrhages in the gastrointestinal tract and kidneys.

Skin: May cause ulcers, dermatitis and is topically corrosive.

Eye: May cause eye injuries and conjunctivitis.

Target Organs: May affect the heart, central nervous system, blood, respiratory system, liver, kidneys, skin and eyes.

Medical Conditions Generally Aggravated by Exposure: Pre-existing respiratory and skin disorders.

Carcinogenicity: NTP: Yes IARC: Yes OSHA: Yes

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove victim to fresh air, keep warm and quiet, give oxygen if breathing is difficult and seek medical attention immediately.

INGESTION: Do not induce vomiting, seek medical attention immediately.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, seek medical attention immediately.

EYE: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention immediately.

VI REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility (Materials to Avoid): Reducing agents, combustible, organic or other readily oxidizable materials.

Hazardous Decomposition Products: Barium, chromium and their oxides.

Hazardous Polymerization: Will not occur.

VII SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material is Released or Spilled: Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Wasted Disposal: Dispose of in accordance with Federal, State and Local regulations.

VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection: NIOSH-approved dust, mist, vapor cartridge.

Ventilation: Use local exhaust to maintain concentration at or below PEL, TLV. General exhaust is not recommended.

Protective Gloves: Butyl or polycarbonate gloves

Eye Protection: Safety goggles

Other Protective Clothing or Equipment: Protective gear suitable to prevent contamination.

IX SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storage: Store in tightly sealed container. Store in a cool, dry area. Wash thoroughly after handling.

Other Precautions: Barium chromate is a hexavalent chromium compound, which are strong irritants and corrosive.

Work Practices: Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

Issued by: S. Dierks
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