

POTASSIUM CHROMATE

Material Safety Data Sheet

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Emergency Telephone Number
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Effective Date: 08-09-93

PRODUCT IDENTIFICATION:

Synonyms: Chromic acid, dipotassium salt, dipotassium chromate

Formula, CAS No.: 7789-00-6 Molecular Weight: 194.19

Hazardous Ingredients: Chemical Formula: K_2CrO_4

Not applicable.

PRECAUTIONARY MEASURES

DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE. CAUSES BURNS. CONTAINS HEXAVALENT CHROMIUM. EXPOSURE MAY CREATE A CANCER RISK. HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.

Keep from contact with clothing and other combustible materials.

Store in a tightly closed container.

Do not breathe dust.

Use only with adequate ventilation.

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Remove and wash contaminated clothing promptly.

EMERGENCY/FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person.

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. In all cases call a physician.

SEE SECTION 5.

DOT Hazard Class: ORM-E

Physical Data:

SECTION 1

Appearance: Yellow Crystals.

Odor: Odorless.

Solubility: 63g/100 g water @ 20°C (68°F).

Boiling Point: No information found.

Vapor Density (Air=1): No information found.

Melting Point: 968°C (1774°F).

Vapor Pressure (mm Hg): No information found.

Density: 2.73

Evaporation Rate: No information found.

SECTION 2

Fire and Explosion Information

Fire:

Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Releases oxygen upon decomposition which enhances combustion.

Explosion:

Contact with oxidizable substances may cause extremely violent combustion.

Fire Extinguishing Media:

Flood with large amounts of water. Water spray may be used to keep fire exposed containers cool. Do not allow water run off to enter sewer.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Reactivity Data

SECTION 3

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Emits oxygen and toxic oxides of chromium when heated to decomposition.

Hazardous Polymerization:

This substance does not polymerize.

Incompatibilities:

Reducing agents and flammable material.

Leak/Spill Disposal Information

SECTION 4

Ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from dust.

Spills: Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust. Keep out of sewers.

Disposal: Whatever cannot be saved for reclamation may be disposed in an RCRA approved hazardous waste facility. Flush area of spill with dilute ferrous sulfate or sodium sulfite solution.

Reportable Quantity (RQ) (CWA/CERCLA) : 1000 lbs.

Ensure compliance with local, state and federal regulations.

Potassium Chromate

Health Hazard Information

SECTION 5

A. Exposure/Health Effects

Inhalation:

May cause irritation to the respiratory tract, coughing, wheezing, fever, headache, and labored breathing. May produce pulmonary sensitization.

Ingestion:

May cause abdominal pain, vomiting, diarrhea, dizziness, intense thirst, shock, and liver damage. May be followed by circulatory collapse or toxic nephritis.

Skin Contact:

May cause irritation, redness, ulcerations, and scarring. Skin may become sensitized. Absorption through the skin may cause systemic poisoning; symptoms may parallel ingestion.

Eye Contact:

May cause redness, pain, blurred vision.

Chronic Exposure:

Prolonged or repeated skin exposure may cause dermatitis. Exposure may create a cancer risk.

Aggravation of

Pre-existing Conditions:

Persons with pre-existing skin disorders may be more susceptible to the effects of this substance.

B. FIRST AID

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately.

Skin Exposure:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician.

Eye Exposure:

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (NTP, 1982)

Mutation referenced cited.
Reproductive data cited.

Hexavalent Chromium compounds are listed as carcinogens by the National Toxicology Program (NTP) and by the International Agency for Research on Cancer (IARC). Carcinogenic Determination - Animal / Inadequate Data (IARC 23,302 80) Hexavalent Chromium Compounds: Sufficient evidence for carcinogenicity in short term testing (IARC Suppl. 4, 1982). There is sufficient evidence for increased incidence of lung cancer among workers in the chromate-producing industry and possibly also among chromium platers and chromium alloy workers. There is also a suggestion of increased incidence of cancers at other sites. However, the chromium compounds responsible cannot be specified. (NTP, Third Annual Report on Carcinogens; 1982)

Occupational Control Measures

SECTION 6

Airborne Exposure Limits:

-OSHA Permissible Exposure Limit (PEL):
0.5 mg(Cr)/m³
-ACGIH Threshold Limit Value (TLV):
0.05 mg (Cr)/m³
NIOSH Criteria Document Recommendation:
Occupational Exposure to Cr(VI): 25 µg/m³ (TWA)
Ceiling limit: 50 µg/m³/15M.

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of the into the general work area. Please refer to the ACG document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators
(NIOSH Approved)

If the TLV is exceeded, a dust/mist respirator with chemical goggles may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or affixed hood may be worn.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information

SECTION 7

Protect against physical damage. Store in a dry location separate from combustible, organic or other readily oxidizable materials. Avoid storage on wood floors. Remove and dispose of any spilled dichromates; do not return to original containers.

Wear special protective equipment (Sec. 6) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace.

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