

Acute Effects:

Inhalation: May cause irritation, possibly severe. May cause allergic reactions. Additional effects may include fever, loss of voice, chest pain, difficulty breathing, headache, dizziness, lung congestion and kidney damage.

Ingestion: May cause burns. May cause allergic reactions. Additional effects may include redness and swelling of the skin, vomiting, digestive disorders, inability to urinate, dizziness, liver and kidney damage, convulsions, shock and coma.

Skin: May cause irritation, possibly severe. May cause allergic reactions. Additional effects may include nausea, vomiting, kidney damage, shock and coma.

Eye: May cause burns. Additional effects may include eye damage.

Chronic Effects:

Inhalation: In addition to effects from short term exposure, perforation of the nose, lack of sense of smell, lack of sense of smell and taste, tooth decay, digestive disorders, asthma, perforated eardrum, lung damage and liver damage may occur. May also cause cancer.

Ingestion: Same as short term exposure.

Skin: Same effects as acute exposure.

Eye: May cause same effects as short term exposure. Additional effects may include tearing and red bands around the cornea.

Carcinogenicity: OSHA: No NTP: Yes IARC: Yes

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove victim to fresh air. Keep warm and quiet, give oxygen if breathing is difficult, perform artificial respiration if necessary. Treat symptomatically and supportively. . GET MEDICAL ATTENTION IMMEDIATELY!

INGESTION: Remove by gastric lavage or emesis. Maintain blood pressure and airway. Give oxygen if respiration is depressed. Do not perform gastric lavage or emesis if victim is unconscious. GET MEDICAL ATTENTION IMMEDIATELY!!! Administration of gastric lavage or oxygen should be performed by qualified medical personnel.

SKIN: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water for at least 15 minutes. If burns occur, proceed with the following: Cover affected area securely with sterile, dry, loose-fitting dressing. Treat symptomatically and supportively. Seek medical attention immediately.

EYE: Flush with lukewarm water, lifting upper and lower eyelids for at least 15 minutes. Continue irrigating with normal saline until the pH has returned to normal (30-60 minutes). SEEK MEDICAL ATTENTION IMMEDIATELY.

Note To Physician: Antidote: The following antidote has been recommended. However, the decision as to whether the severity of poisoning requires administration of any antidote and actual dose required should be made by qualified medical personnel. Use of dimercaprol has been suggested on the basis of findings in animals. Give 3 mg/kg (or 0.3 ml/10 kg) every 4 hours, intramuscularly for the first 2 days and then 2 mg/kg every 12 hours for a total of 10 days (Dreisbach, Handbook of Poisoning, 12th Ed.) Antidote should only be administered by qualified medical personnel.

VI REACTIVITY DATA

Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: May ignite other combustible materials (wood, paper, oil, etc.). Reaction with fuels may be violent. Flammable poisonous gases may accumulate in tanks and hopper cars. Runoff to sewer may create fire or explosion hazard.

Incompatibility (Material to Avoid): Combustible materials: May increase the burning rate or cause ignition on contact. Finely divided materials may result in an explosion. Reducing Agents: Fire and explosion hazard.

Hazardous Decomposition Products: Thermal decomposition products may include oxides of chromium.

Hazardous Polymerization: Will not occur under normal temperatures and pressures.

VII SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Keep combustibles (wood, paper, oil, etc...) away from spilled material. Do not touch spilled material. Stop leak if you can do so without risk. Use water spray to reduce vapors. Do not get water inside container. For small dry spills, use a clean shovel to place material into a clean, dry containers and cover. Move containers from spill area. For small liquid spills, flush area with flooding amounts of water. For larger spills, dike far ahead of spill for later disposal. Keep unnecessary people away. Isolate hazard area and deny entry. In the event of a water spill note that the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) prohibits contaminating any known source of drinking water with substances known to cause cancer and/or reproductive toxicity.

VIII SPECIAL PROTECTION INFORMATION

Respirator: Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode.

Ventilation: Provide local exhaust or process enclosure ventilation to meet published exposure limits.

Gloves: Employee must wear appropriate protective gloves to prevent contact with this substance.

Eye Protection: Employee must wear splash-proof or dust-resistant safety goggles and a face shield to prevent contact with this substance. Where there is any possibility that an employee's eyes and/or skin may be exposed to this substance, the employer should provide an eye wash fountain and quick drench shower within the immediate work area for emergency use.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent any possibility of skin contact with this substance.

IX SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storage: Store and handle in accordance with all current regulations and standards. NFPA 430 Code for the storage of liquid and solid oxidizing materials. Keep separated from incompatible substances.

Other Precautions: Contact with combustible material may cause fire. May cause sensitization by inhalation. May cause sensitization by skin contact. May cause cancer by inhalation. May cause harm to breast-fed babies. Keep out of reach of children. Avoid contact with skin. If swallowed, seek medical advice immediately.

Subject to California Proposition 65 cancer and/or reproductive toxicity warning and release requirements (hexavalent chromium compounds) (February 27, 1987)

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