

MATERIAL SAFETY DATA SHEET

Product: **Ammonium Dichromate**

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Material Identity

Product Name: Ammonium Dichromate, Granular

Product Code: CH-7789095A

Chemical Formula: $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$

General or Generic ID: Ammonium Bichromate; Dichromic acid, diammonium salt

Company

ArtChemicals.com

2300 Davis Street

San Leandro, CA 94577-2204

510-639-4670

Emergency Telephone Number:

1-800-451-8346

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>CAS No.</u>	<u>Chemical Identity</u>	<u>Common Name</u>	<u>%</u>
7789-09-5	N/A	Ammonium Dichromate	100

3. HAZARDS IDENTIFICATION

Potential Health Effects

Eye:

Hazardous in case of eye contact (irritant). Symptoms include stinging, tearing, redness and impairment of vision. The degree of injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment.

Skin:

Hazardous in case of skin contact (irritant). The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment.

Ingestion:

Hazardous in case of ingestion. Severe over-exposure can produce lung damage, choking, unconsciousness or death.

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Inhalation:

Hazardous in case of inhalation. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death.

Symptoms of Exposure:

Not available.

Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation. Severe over-exposure can result in death.

Development Information:

ORAL (LD50): Acute: Not available.

The substance may be toxic to blood, kidneys, liver.

Repeated or prolonged exposure to the substance can produce target organs damage.

Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Cancer Information:

Not available.

Primary Route(s) of Entry:

Inhalation, skin absorption, skin contact, and eye contact.

4. FIRST AID MEASURES

Inhalation:

If affected, promptly remove individual to fresh air. If not breathing, give artificial respiration. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Get medical attention immediately.

Ingestion:

Do NOT induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. Call physician immediately.

Eyes:

Remove contact lenses if worn. In case of contact, immediately flush with water for at least 15 minutes. Do not use eye ointment. Seek medical attention immediately.

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Skin:

Immediately remove contaminated clothing and thoroughly flush skin with plenty of water (15 minutes). Wash thoroughly with disinfectant soap and water. Cold water may be use. Launder clothing before reuse. Get medical attention immediately.

Note to Physicians:

Not available.

5. FIRE FIGHTING MEASURES

Flash Point: May be combustible at high temperature.

Explosive Limit: Not applicable.

Auto-ignition Temperature: 190 °C (474 °F).

Hazardous Products of Combustion: Not applicable. Some metallic oxides.

Extinguishing Media: Oxidizing material. Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.

SPECIAL FIRE-FIGHTING PROCEDURES: May ignite by friction with carbide. In contact with substances which are readily oxidized, these can react rapidly enough to cause ignition.

NFPA CODES: Health = 2 Flammability = 1 Reactivity = 1

6. PRECAUTIONS FOR SAFE HANDLING AND USE**Steps To Be Taken In Case Material Is Released Or Spilled:****Small Spill:**

Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface. If necessary: **Neutralize the residue with a dilute solution of sodium carbonate.**

Large Spill:

Oxidizing material. Poisonous solid.

Stop leak if without risk. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substances damp using water spray. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

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Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

7. PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Do not store above 24 °C (75.2 °F). Keep locked up.. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material.. Empty containers pose a fire risk, evaporate the residue under a fume hood. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as combustible materials, organic materials, acids, alkalis.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Be sure to use an approved/certified respirator or equivalent.

Skin Protection:

Wear resistant gloves. To prevent repeated or prolonged skin contact, wear impervious clothing and boots or lab coat.

Eye Protection:

Chemical splash goggles in compliance with OSHA regulations are advised. Face shield. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Other Protective Clothing or Equipment:

Provide sufficient mechanical ventilation to maintain exposure below level of overexposure. Boots. Full suit. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling product.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Orange-red crystalline solid. (Odor not available.)

Molecular Weight: 252.1 g/mole

pH: 3.95

Boiling Point: Not available.

Melting Point: Not available.

Specific Gravity: 2.155 (Water=1).

Vapor Pressure: Not applicable.

Evaporation Rate: Not available.

Solubility in Water: Soluble in cold water, hot water.

10. STABILITY AND REACTIVITY

Incompatibility: Combustible materials, organic materials, acids, alkalis, moisture.

Stability: Unstable.

Hazardous Decomposition: N/A

Hazardous Polymerization: Will not occur.

Special Remarks on Reactivity: It is an oxidizing material and combustible solid. Decomposes vigorously with luminescence around 200 C. Decomposes at about 180 C. Decomposition becomes self-sustaining at about 225 C with swelling and evolution of heat and nitrogen. It is incompatible with combustible, organic, or other readily oxidizable materials: Paper, wood, sulfur, aluminum, plastics, acids, bases, potassium chlorate, sodium nitrite, alcohols, ethylene glycol, water.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity (LD50): Not available.

CARCINOGENIC EFFECTS: Classified A1 (Confirmed for human.) by ACGIH, 1 (Proven for human.) by IARC.

MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: blood, kidneys, liver.

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Acute Potential Health Effects:

Skin: Causes skin irritation. May be absorbed through skin

Eyes: Causes eye irritation.

Inhalation: Causes respiratory tract and mucous membrane irritation. It may be destructive to the tissues of the mucous membranes

Ingestion: May cause intense gastrointestinal tract irritation. May affect blood, Kidneys (urinary system), and liver. Symptoms of acute poisoning may include ulceration and corrosion, epigastric pain, nausea, vomiting, diarrhea, vertigo, fever, muscle cramps, hemorrhagic diathesis, toxic nephritis, renal failure, intravascular hemolysis, circulatory collapse, liver damage, peripheral vascular collapse, acute multi-system shock and coma, and even death depending on the dose.:

Chronic Potential Health Effects:

Chronic poisoning usually results from inhalation or skin contact. May affect the blood, kidneys and liver.

Signs and symptoms may include lacrimation, dermatitis, penetrating ulcers, perforation of nasal septum, pulmonary edema, congestion, chronic rhinitis, polyps of the upper respiratory tract, inflammation of the lung, emphysema, tracheitis, bronchitis, pharyngitis, adhesions of the diaphragm, inflammation of larynx, conjunctivitis, loss of appetite, nausea, vomiting, inflammation of liver or even acute hepatitis with jaundice, respiratory irritations, leukocytosis, leukopenia, monocytosis, and eosinophilia.

12. ECOLOGICAL INFORMATION

Not available.

Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.

13. DISPOSAL CONSIDERATION

Waste Disposal Method:

Dispose of in accordance with all applicable local, state and federal regulations.

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14. DOT SHIPPING NAME & IDENTIFICATION:

AMMONIUM DICHROMATE.
Class 5.1. Oxidizing material.
UNNA:1439. PG: III

15. OTHER INFORMATION

The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with the company or not. Recipients are advised to confirm in advance of need that information is current, applicable, and suitable to their circumstances.