

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 1 of 9

Ammonium Dichromate

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Ammonium Dichromate

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25169A

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Health hazard



Specific target organ toxicity following repeated exposure, category 1
Respiratory sensitization, category 1
Carcinogenicity, category 1B
Germ cell mutagenicity, category 1B
Reproductive toxicity, category 1B

Corrosive



Skin corrosion, category 1B
Serious eye damage, category 1

Irritant



Skin sensitization, category 1
Acute toxicity (oral, dermal, inhalation), category 4

Environmentally Damaging



Acute hazards to the aquatic environment, category 1
Chronic hazards to the aquatic environment, category 1

Oxidizing



Oxidizing solids, category 2

Toxic



Acute toxicity (oral, dermal, inhalation), category 2
Acute toxicity (oral, dermal, inhalation), category 3

AcTox Dermal 4.

Ox Sol. 2.

Resp. Sens. 1.

Aquatic ChrTox 1.

Skin Sens. 1.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 2 of 9

Ammonium Dichromate

Carc. 1B.
AcTox Inhaln 2.
Skin Corr. 1B.
Eye Damage. 1.
Germ cell Muta. 1B.
Reprod Tox. 1B.
AcTox Oral 3.
STOT RE 1.
Aquatic AcTox. 1.

Signal word: Danger

Hazard statements:

May intensify fire; oxidizer.
Toxic if swallowed.
Causes damage to organs through prolonged or repeated exposure.
May damage fertility or the unborn child.
Harmful in contact with skin.
Fatal if inhaled.
Causes severe skin burns and eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause genetic defects.
May cause cancer.
Very toxic to aquatic life with long lasting effects.

Precautionary statements:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not handle until all safety precautions have been read and understood.
Take any precaution to avoid mixing with combustibles.
Keep/Store away from clothing/combustible materials.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear respiratory protection.
Do not breathe dust/fume/gas/mist/vapours/spray.
Obtain special instructions before use.
If skin irritation or a rash occurs: Get medical advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Collect spillage.
Wash contaminated clothing before reuse.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Specific treatment is urgent (see ... on this label).
In case of fire: Use agents recommended in section 5 for extinction.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 3 of 9

Ammonium Dichromate

Continue rinsing.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Store in a well ventilated place. Keep container tightly closed.

Store locked up.

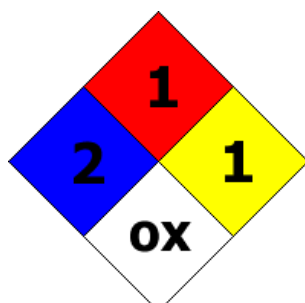
Dispose of contents and container as instructed in Section 13.

Other Non-GHS Classification:

WHMIS



NFPA/HMIS



NFPA SCALE (0-4)

Health	3
Flammability	0
Physical Hazard	2
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:

CAS 7789-09-5

Ammonium Dichromate

99 %

Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. If not breathing give artificial respiration. Immediately get medical assistance. If breathing is difficult,

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 4 of 9

Ammonium Dichromate

give oxygen. Poisonous material.

After skin contact:

Take victim to hospital immediately. Remove contaminated clothing and shoes. Wash off with soap and plenty of water. Consult a physician. Flush with water for 15 minutes. Get medical assistance if irritation develops.

After eye contact:

Rinse or flush exposed eye gently using water for 15-20 minutes. Protect unexposed eye. If able remove contact lenses while rinsing. Rinse or flush eye gently with water for at least 30 minutes, lifting upper and lower lids. Seek immediate medical attention (ophthalmologist).

After swallowing:

Dilute with milk and water. Rinse mouth with water. Call poison control center. Do not induce vomiting. Immediately call POISON CONTROL center for advice. Seek immediate medical attention.

Most important symptoms and effects, both acute and delayed:

Poison if ingested. May be fatal if swallowed or inhaled. Irritation. Nausea. Headache. Shortness of breath. Causes tissue burns-all routes of exposure. May cause blindness. May cause allergic reaction. May cause deep ulcers and dermatitis. Causes gastrointestinal tract burns. May cause asthmatic attack, ulcers, and holes through nasal cavity. Causes chemical burns to respiratory tract. Prolonged inhalation may cause nosebleeds, nasal congestion, chest pain, erosion of teeth, holes in nasal cavity, bronchitis. Prolonged eye contact may cause conjunctivitis. May cause kidney and liver damage. May cause cancer in humans. Risk of harm to unborn children and impair fertility.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Notes to Physician: Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water only. Carbon Dioxide or Halon may provide limited control, and are not the preferred extinguishing media.

Unsuitable extinguishing agents:

Do not use dry chemical or foam.

Special hazards arising from the substance or mixture:

Fire hazard when exposed to heat, friction, or mechanical shock. Dust deposits should not be allowed to accumulate on surfaces. Dust may form an explosive mixture if sufficient concentration is released into the atmosphere.

Advice for firefighters:

Protective equipment:

Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA).

Additional information (precautions):

Ensure adequate ventilation. Highly water soluble Cr(VI) substances can cause severe skin effects. Fire Fighting Instructions: Use normal procedures. Use protective clothing. Use NIOSH approved breathing equipment. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Wear protective clothing. Do not inhale gases, fumes, dust, mist, vapor, and aerosols.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Do not clean with combustible materials. Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use spark-proof tools and explosion-proof equipment.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 5 of 9

Ammonium Dichromate

Environmental precautions:

Avoid release to the environment. Do not let product enter drains. Prevent from reaching drains, sewer, or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

Place in container for disposal according to local regulations (see section 13). Place into properly labeled containers for recovery or disposal. Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations. Contain spillage and then collect with an electrically protected vacuum cleaner or by wet-brushing.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas. Wash hands after handling. Do not inhale gases, fumes, dust, mist, vapor, and aerosols. Follow Chemical Hygiene Plan. Keep product and empty container away from heat and sources of ignition.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, and well-ventilated area. Keep away from food, beverages, and feed sources. Protect from freezing and physical damage. Keep product and empty container away from heat and sources of ignition. Store with like hazards. Do not store with combustibles. Do not grind or subject to friction or shock.

SECTION 8: Exposure controls/personal protection



Control Parameters:

7789-09-5, Ammonium dichromate, OSHA: 1mg/10m³.
7789-09-5, Hexavalent chromium (Cr VI), OSHA PEL TWA: 5 ug/m³.
7789-09-5, Ammonium dichromate, ACGIH TLV: 0.05mg/m³.

Appropriate Engineering controls:

It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under fume hood.

Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Not required under normal conditions of use.

Protection of skin:

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation.

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 6 of 9

Ammonium Dichromate

Eye protection: Safety Glasses or goggles. Wear a face shield. Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

General hygienic measures: Keep away from food, beverages, and feed sources. Wash hands before breaks and immediately after handling the product. Wash off with soap and plenty of water. Avoid contact with skin, eyes, and clothing. Remove contaminated clothing and shoes. Before wearing wash contaminated clothing.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Orange-red crystalline	Explosion limit lower: Explosion limit upper:	Not Determined Not Determined
Odor:	Odorless	Vapor pressure at 20°C:	Not Determined
Odor threshold:	Not Determined	Vapor density:	Not Determined
pH-value:	3.45 (10% solution)	Relative density:	2.15
Melting/Freezing point:	170 °C (338 °F) decomposes	Solubilities:	360 g/L at 20 °C.
Boiling point/Boiling range:	Not Determined	Partition coefficient (n-octanol/water):	Not Applicable
Flash point (closed cup):	Not Determined	Auto/Self-ignition temperature:	Not Determined
Evaporation rate:	Not Determined	Decomposition temperature:	Decomposes at 180°C
Flammability (solid, gaseous):	Self-ignite at ~180°C and above. Reaction self sustaining and very exothermic	Viscosity:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density at 20°C:	2.15 g/cm ³ at 20 °C Explosive Properties:: Explosive if heated in a closed container. Used in pyrotechnics. Does not meet criteria for class I explosive.		

SECTION 10: Stability and reactivity

Reactivity: None

Chemical stability:

May be explosive if heated.

Possible hazardous reactions:

Hazardous decomposition products formed under fire conditions.

Conditions to avoid:

Keep product and empty container away from heat and sources of ignition.

Incompatible materials:

Reducing agents. Alcohols. Strong acids. Strong bases. Hydrazine. Sodium nitrate. Carbides. Ethylene glycol.

Hazardous decomposition products:

Nitrogen oxides (NO_x). Chromium oxides (CrO, Cr₂O₃, CrO₂, CrO₃, CrO₅). Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 7 of 9

Ammonium Dichromate

67.5 mg/kg LD50 oral-rat

Inhalation:

0.156mg/L 4h LC50 inhalation-rat

Chronic Toxicity: No additional information.

Corrosion Irritation:

Dermal:

CLP This product is classified to causes severe skin burns.

Ocular:

CLP This product is classified to causes severe eye damage.

Sensitization:

Product is considered a strong skin and respiratory sensitizer.

Numerical Measures: No additional information.

Carcinogenicity: No additional information.

Mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity: No additional information.

Persistence and degradability:

Readily degradable in the environment.

Bioaccumulative potential: No additional information.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Product or containers must not be disposed together with household garbage. Consult federal, state/provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

1439

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Ammonium Dichromate.

Hazard Class: 5

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Ammonium Dichromate.

Hazard Class: 5

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 8 of 9

Ammonium Dichromate

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Reactive, Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

7789-09-5 Ammonium dichromate (ammonium bichromate).

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

7789-09-5 Ammonium bichromate 10.

Proposition 65 (California):

Chemicals known to cause cancer:

7789-09-5 Chromium (hexavalent compounds).

Chemicals known to cause reproductive toxicity for females:

7789-09-5 Chromium (hexavalent compounds).

Chemicals known to cause reproductive toxicity for males:

7789-09-5 Chromium (hexavalent compounds).

Chemicals known to cause developmental toxicity:

7789-09-5 Chromium (hexavalent compounds).

Canada

Canadian Domestic Substances List (DSL):

7789-09-5 Ammonium dichromate.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

7789-09-5 Ammonium dichromate.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.18.2014

Page 9 of 9

Ammonium Dichromate

provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Effective date: 12.18.2014

Last updated: 06.17.2015