

# Safety Data Sheet

## Ammonium Dichromate

**CAROLINA**<sup>®</sup>  
www.carolina.com

### Section 1 Product Description

**Product Name:** Ammonium Dichromate  
**Recommended Use:** Science education applications  
**Synonyms:** Dichromic Acid Ammonium Salt, Diammonium Dichromate  
**Distributor:** Carolina Biological Supply Company  
2700 York Road, Burlington, NC 27215  
1-800-227-1150  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F)  
**Chemtrec:** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**DANGER**



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

**GHS Classification:**

Serious Eye Damage/Eye Irritation Category 1, Respiratory Sensitisation Category 1, Germ Cell Mutagenicity Category 1B, Carcinogenicity Category 1A, Reproductive Toxicity Category 1B, Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 1, Hazardous to the aquatic environment - Acute Category 1, Hazardous to the aquatic environment - Chronic Category 1, Oxidizing Solid Category 2, Acute Toxicity - Inhalation Dust / Mist Category 2, Acute Toxicity - Oral Category 3, Acute Toxicity - Dermal Category 4

**Other Safety Precautions:** IF exposed or concerned: Get medical advice/attention.  
**Acute Toxicity Inhalation Gas Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity  
**Acute Toxicity Inhalation Vapor Contains** 100 % of the mixture consists of ingredient(s) of unknown toxicity

### Section 3 Composition / Information on Ingredients

<u>Chemical Name</u>	<u>CAS #</u>	<u>%</u>
Ammonium Dichromate	7789-09-5	100

### Section 4 First Aid Measures

**Emergency and First Aid Procedures**

**Inhalation:** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
**Eyes:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**Skin Contact:** IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.  
**Ingestion:** IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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## Section 5

## Firefighting Procedures

<b>Extinguishing Media:</b>	Water in flooding amounts. Do not use dry chemical, CO <sub>2</sub> , or halon. Alcohol foam
<b>Fire Fighting Methods and Protection:</b>	Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
<b>Fire and/or Explosion Hazards:</b>	Contact with combustible material may cause fire. Risk of explosion if heated under confinement. Fire or excessive heat may produce hazardous decomposition products.
<b>Hazardous Combustion Products:</b>	Product is a strong oxidizer. Nitrogen oxides, Metal Oxides,

## Section 6

## Spill or Leak Procedures

<b>Steps to Take in Case Material Is Released or Spilled:</b>	Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits. Ventilate the contaminated area. Evacuate the area promptly. Isolate area. Keep unnecessary personnel away. Avoid the generation of dusts during clean-up.
<b>Environmental Precautions:</b>	Ventilate the area by opening door and/or turning on fans and blowers. Vacuum or sweep up material and place in a disposal container Small spill (an incidental release): Wear complete and proper personal protective equipment ventilate the area. Contain and absorb with granulated clay or other absorbent material and put into properly labeled containers for disposal. Do not allow the spilled product to enter public drainage system or open waterways. Avoid creating dusts. Eliminate ignition sources. If a vacuum is used, ensure that the material is wetted or otherwise treated so an explosive dust atmosphere is not created within the vacuum. Gather and store in a sealed container pending a waste disposal evaluation. Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Collect spillage.

## Section 7

## Handling and Storage

<b>Handling:</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. – No smoking. Keep/Store away from clothing/.../combustible materials. Take any precaution to avoid mixing with combustibles. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection. Use personal protective equipment as required. Wear respiratory protection. In case of inadequate ventilation wear respiratory protection. Avoid contact with skin and eyes. Keep away from combustible material. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
<b>Storage:</b>	Store in a well-ventilated place. Keep container tightly closed. Store locked up. Store in a secure area suitable for oxidizing agents. Store away from flammable materials, organic solvents and combustible materials.
<b>Storage Code:</b>	Blue - Toxic. Store separately in a secured area.

## Section 8

## Protection Information

<b>Chemical Name</b>	<b>ACGIH</b>		<b>OSHA PEL</b>	
	<b>(TWA)</b>	<b>(STEL)</b>	<b>(TWA)</b>	<b>(STEL)</b>
Ammonium Dichromate	0.05 mg/m <sup>3</sup> TWA (as Cr)	N/A	5 µg/m <sup>3</sup> TWA	N/A

### Control Parameters

<b>Engineering Measures:</b>	Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure. If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
<b>Personal Protective Equipment (PPE):</b>	Lab coat, apron, eye wash, safety shower.
<b>Respiratory Protection:</b>	Respiratory protection will be required when handling this product. Use respirators only if ventilation cannot be used to eliminate symptoms or reduce the exposure to below acceptable levels. Wear a NIOSH approved respirator if any exposure is possible.

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**Respirator Type(s):** NIOSH approved air purifying respirator with dust/mist filter.  
**Eye Protection:** Wear chemical splash goggles when handling this product. Have an eye wash station available.  
**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Impervious rubber Polyvinyl chloride  
**Gloves:** No information available

## Section 9 Physical Data

<b>Formula:</b> (NH <sub>4</sub> ) <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	<b>Vapor Pressure:</b> N/A
<b>Molecular Weight:</b> 252.06	<b>Evaporation Rate (BuAc=1):</b> N/A
<b>Appearance:</b> Crystalline Solid	<b>Vapor Density (Air=1):</b> N/A
<b>Odor:</b> No data available	<b>Specific Gravity:</b> 2.15
<b>Odor Threshold:</b> No data available	<b>Solubility in Water:</b> Soluble
<b>pH:</b> 3.0 - 4.0 at 50 g/l at 25 °C	<b>Log Pow (calculated):</b> No data available
<b>Melting Point:</b> 180 C	<b>Autoignition Temperature:</b> 190 C
<b>Boiling Point:</b> No data available	<b>Decomposition Temperature:</b> No data available
<b>Flash Point:</b> No data available	<b>Viscosity:</b> No data available
<b>Flammable Limits in Air:</b> N/A	<b>Percent Volatile by Volume:</b> 0%

## Section 10 Reactivity Data

<b>Reactivity:</b>	No data available
<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	None known.
<b>Incompatible Materials:</b>	Alcohols, Acids, Strong reducing agents
<b>Hazardous Decomposition Products:</b>	Metal Oxides,, Nitrogen oxides
<b>Hazardous Polymerization:</b>	Will not occur

## Section 11 Toxicity Data

<b>Routes of Entry</b>	Inhalation and ingestion.
<b>Symptoms (Acute):</b>	Respiratory disorders, , Eye disorders
<b>Delayed Effects:</b>	No data available

Acute Toxicity:	CAS Number	Oral LD50	Dermal LD50	Inhalation LC50
<b>Chemical Name</b> Ammonium Dichromate	7789-09-5	Oral LD50 Rat Not determined 53 mg/kg	Not determined	Inhalation LC50 (4h) Rat Not determined 160 ppm

Carcinogenicity:	CAS Number	IARC	NTP	OSHA
<b>Chemical Name</b> Ammonium Dichromate	7789-09-5	Listed	Listed	Listed

<b>Chronic Effects:</b>	
<b>Mutagenicity:</b>	Evidence of a mutagenic effect.
<b>Teratogenicity:</b>	Evidence of a teratogenic effect (birth defect).
<b>Sensitization:</b>	Evidence of a sensitization effect.
<b>Reproductive:</b>	Evidence of negative reproductive effects.
<b>Target Organ Effects:</b>	
<b>Acute:</b>	See Section 2
<b>Chronic:</b>	Listed by NTP, IARC as causing cancer., Mutation data cited., Reproductive data cited.

## Section 12 Ecological Data

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**Overview:** Severe ecological hazard. This product may be toxic to plants and/or wildlife. Components of this product are hazardous to wildlife and aquatic life.

**Mobility:** No data  
**Persistence:** No data  
**Bioaccumulation:** No data  
**Degradability:** No data  
**Other Adverse Effects:** No data

**Chemical Name** Ammonium Dichromate  
**CAS Number** 7789-09-5  
**Eco Toxicity** 96 HR LC50 GAMBUSIA AFFINIS 136 MG/L

## Section 13 Disposal Information

**Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance. Incinerate spent or discarded material a permitted hazardous waste facility. Perform a waste determination prior to disposal. Dispose of hazardous waste at RCRA permitted facilities. All other wastes should be disposed at permitted facilities that accept industrial waste.

**Waste Disposal Code(s):** Not Determined

## Section 14 Transport Information

**Ground - DOT Proper Shipping Name:** UN1439, Ammonium dichromate, 5.1, II  
**Air - IATA Proper Shipping Name:** UN number: 1439 Class: 5.1 Packing group: II Proper shipping name: Ammonium dichromate

## Section 15 Regulatory Information

**TSCA Status:** All components in this product are on the TSCA Inventory.

Chemical Name	CAS Number	§ 313 Name	§ 304 RQ	CERCLA RQ	§ 302 TPQ	CAA 112(2) TQ
Ammonium Dichromate	7789-09-5	No	10 lb RQ	10 lb final RQ; 4.54 kg final RQ	No	No

**California Prop 65:** WARNING: This product contains a chemical known to the state of California to cause cancer and birth defects or other reproductive harm.

## Section 16 Additional Information

**Revised:** 09/09/2015

**Replaces:** 09/03/2014

**Printed:** 10-29-2015

The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

### Glossary

ACGIH	American Conference of Governmental Industrial Hygienists	NTP	National Toxicology Program
CAS	Chemical Abstract Service Number	OSHA	Occupational Safety and Health Administration
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	PEL	Permissible Exposure Limit
DOT	U.S. Department of Transportation	ppm	Parts per million
IARC	International Agency for Research on Cancer	RCRA	Resource Conservation and Recovery Act
N/A	Not Available	SARA	Superfund Amendments and Reauthorization Act
		TLV	Threshold Limit Value
		TSCA	Toxic Substances Control Act
		IDLH	Immediately dangerous to life and health