

**MATERIAL SAFETY DATA SHEET****Product Name:** Ammonium oxalate monohydrate**CAS No.:** 6009-70-7**Version:** 0**1. Identification**

**Product Code** : 90332  
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**2. Composition/Information on Ingredients**

<b>Ingredient</b>	<b>CAS No</b>	<b>Percent</b>
AMMONIUM OXALATE MONOHYDRATE	6009-70-7	99-100 %

**3. Hazards Identification****Hazard classification**

**Emergency Overview** : POISON! DANGER! MAY BE FATAL IF SWALLOWED OR INHALED. MAY CAUSE BURNS TO RESPIRATORY TRACT AND SEVERE IRRITATION TO SKIN AND EYES. MAY AFFECT KIDNEYS.

**Health Rating** : 3 - Severe (Poison)  
**Flammability Rating** : 0 - None  
**Reactivity Rating** : 1 - Slight  
**Contact Rating** : 3 - Severe (Corrosive)

**Potential Health Effects** :

**Inhalation** : Inhalation of dust is corrosive to mucous membranes. Oxalates can be absorbed through the lungs. Symptoms of poisoning include nervousness, cramps, central nervous system depression.

**Ingestion** : Mean lethal dose for oxalates in adults is estimated at 15-30 grams with death within a few hours or even minutes. Corrosive action on the mucosa and severe gastroenteritis can occur with pain, vomiting, etc. Sharp reduction of serum calcium can cause dysfunction of the brain. Calcium oxalate may be deposited in the kidneys.

**Skin Contact** : Skin contact may produce severe skin irritation with burning, redness.

**Eye Contact:** : May cause severe irritation and pain. May cause burns.

**Chronic Exposure** : Circulatory failure or nervous system irregularities may follow prolonged calcium metabolism disturbances due to oxidation.

**Aggravation of Pre-existing Conditions** : Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

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- General information** : Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand. Show this safety data sheet to the doctor in attendance.
- Ingestion** : If swallowed, **DO NOT INDUCE VOMITING**. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Inhalation** : Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Skin contact** : Wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
- Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
- Note to Physician** : Carefully monitor cardiovascular, respiratory, neurologic and renal functions. Treat supportively in consultation with a medical toxicologist.

**5. Fire fighting measures**

- Fire:** : Not considered to be a fire hazard.
- Explosion** : Not considered to be an explosion hazard.
- Fire Extinguishing Media** : Use any means suitable for extinguishing surrounding fire.
- Special Information** : In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode

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## 6. Accidental Release Measures

<b>Personal precautions</b>	:	Keep unnecessary personnel away. Keep upwind. Ventilate the area. Avoid inhalation of dust from the spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
<b>Environmental precautions</b>	:	Prevent further leakage or spillage if safe to do so.
<b>Methods for containment</b>	:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	:	Avoid dust formation. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Large Spills: Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water. Never return spills in original containers for re-use. Clean contaminated surface thoroughly. Clean up in accordance with all applicable regulations.

## 7. Handling and Storage

- Precautions for safe handling** : Keep formation of airborne dusts to a minimum. Dust may form explosive mixture with air. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Wash thoroughly after handling.
- Conditions for safe storage, including any incompatibilities** : Keep container tightly closed. Store in a well-ventilated place.

## 8. Exposure Controls Personal Protection

- Airborne Exposure Limits** : None established
- 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 it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

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- Personal Respirators (NIOSH Approved)** : For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, Air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
- Skin Protection** : Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Eye Protection** : Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**9. Physical and Chemical Properties**

- Appearance** : Colorless crystals or granules.  
**Odor** : Odorless.  
**pH** : 6.4 (0.1 molar solution)  
**Melting point/freezing point** : 70C (158F)  
**Initial boiling point and boiling range** : No information found.  
**Flash Point** : No information found.  
**Vapor pressure** : No information found.  
**Vapor density** : No information found.  
**Specific gravity** : 1.50  
**Solubility in water** : 11.8 g/100 g water @ 50C (122F)  
**Solubility (other)** : No data available.  
**Formula** :  $\text{NH}_4\text{OCOCOONH}_4 \cdot \text{H}_2\text{O}$   
**Molecular Weight** : 142.11 g/mol

**10. Stability and Reactivity**

- Stability** : Stable under ordinary conditions of use and storage.  
**Hazardous Decomposition Products** : Burning may produce ammonia, nitrogen oxides.  
**Hazardous Polymerization** : Will not occur  
**Incompatibilities** : Sodium hypochlorite plus ammonium acetate, strong acids.  
**Conditions to Avoid** : Heat, incompatibles.

**11. Toxicological Information****Information on likely routes of exposure**

- Ingestion** : May cause irritation of the gastrointestinal tract.  
**Inhalation** : May cause irritation to the respiratory system.  
**Skin contact** : Causes mild skin irritation.  
**Eye contact** : Causes eye irritation.

**MATERIAL SAFETY DATA SHEET****Product Name:** Ammonium oxalate monohydrate**CAS No.:** 6009-70-7**Version:** 0**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)**

<b>Oral Product</b>	: No data available.
<b>Dermal Product</b>	: No data available.
<b>Inhalation Product</b>	: No data available
<b>Repeated dose toxicity Product</b>	: No data available.
<b>Skin corrosion/irritation Product</b>	: Causes mild skin irritation.
<b>Serious eye damage/eye irritation Product</b>	: Causes eye irritation.
<b>Respiratory or skin sensitization Product</b>	: Not a skin sensitizer.
<b>Carcinogenicity Product</b>	: This substance has no evidence of carcinogenic properties.
<b>IARC Monographs on the Evaluation of Carcinogenic Risks to Humans DIOXANE</b>	: No carcinogenic components identified.
<b>US. National Toxicology Program (NTP) Report on Carcinogens DIOXANE</b>	: No carcinogenic components identified.
<b>US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050</b>	: No carcinogenic components identified.
<b>Germ cell mutagenicity</b>	
<b>In vitro Product</b>	: No mutagenic components identified.
<b>In vivo Product</b>	: No mutagenic components identified.
<b>Reproductive toxicity Product</b>	: No components toxic to reproduction.
<b>Specific target organ toxicity - single exposure Product</b>	: Respiratory tract irritation.
<b>Specific target organ toxicity - repeated exposure Product</b>	: No data available.
<b>Aspiration hazard Product</b>	: Not classified
<b>Other effects</b>	: None known.

**12. Ecological Information****Ecotoxicity****Acute hazards to the aquatic environment :**

<b>Fish Product</b>	: No data available.
<b>Aquatic invertebrates Product</b>	: No data available.
<b>Chronic hazards to the aquatic environment :</b>	
<b>Fish Product</b>	: No data available.
<b>Aquatic invertebrates Product</b>	: No data available.
<b>Toxicity to Aquatic Plants Product:</b>	: No data available.

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**Persistence and degradability**

- Biodegradation Product** : There are no data on the degradability of this product.
- BOD/COD ratio Product** : No data available.
- Bioaccumulative potential**
- Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.
- Partition coefficient n-octanol / water (log Kow) Product** : No data available.
- Mobility in soil** : The product is water soluble and may spread in water systems.
- Other adverse effects** : The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 13. Disposal consideration

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws.
- Contaminated packaging** : Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
<b>DOT</b>	UN1759	AMMONIUM OXALATE	8	III	No
<b>IMDG</b>	UN1759	AMMONIUM OXALATE	8	III	No
<b>IATA</b>	UN1759	AMMONIUM OXALATE	8	III	No

### 15. Regulatory Information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture  
No Data Available.

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