Material Safety Data Sheet
Ammonium Oxalate Monohydrate

ACC# 06510

Section 1 - Chemical Product and Company Identification

MSDS Name: Ammonium Oxalate Monohydrate
Catalog Numbers: S79900, S79900-1, A679-500, A679-500, A679500, NC9469559, NC9516974, S799001, XXGEX7910KG
Synonyms: Diammonium Oxalate, Ethane dic Acid Diammonium Salt, Oxalic Acid Diammonium Salt.

Company Identification:
Fisher Scientific
1 Reagent Lane
Fairlawn, NJ 07410
For information, call: 201-796-7100
Emergency Number: 201-796-7100
For CHEMTREC assistance, call: 800-424-9300
For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINo</th>
</tr>
</thead>
<tbody>
<tr>
<td>6009-70-7</td>
<td>Ammonium Oxalate, Monohydrate</td>
<td>100</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

Hazard Symbols: C
Risk Phrases: 34

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

**Target Organs:** Kidneys, central nervous system, cardiovascular system.

**Potential Health Effects**

**Eye:** Causes eye burns. May cause temporary corneal clouding and ulceration.

**Skin:** Causes skin burns.

**Ingestion:** May cause kidney damage. Causes severe pain, nausea, vomiting, diarrhea, and shock. Causes severe digestive tract burns with abdominal pain, vomiting, and possible death. May cause hemorrhaging of the digestive tract. Can cause nervous system damage. May cause cardiovascular effects including low blood pressure and shock.

**Inhalation:** Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma. May cause effects similar to those described for ingestion. May cause pulmonary edema and severe respiratory disturbances.

**Chronic:** Occasional complications include: GI hemorrhage, kidney and liver damage, cardiac failure, and pulmonary edema. May cause kidney damage.

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**Section 4 - First Aid Measures**

**Eyes:** Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation is required (at least 30 minutes).

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Destroy contaminated shoes.

**Ingestion:** Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

**Inhalation:** Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth respiration.

**Notes to Physician:** Treat symptomatically and supportively.

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**Section 5 - Firefighting Measures**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance is noncombustible. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated.

**Extinguishing Media:** Do NOT get water inside containers. For small fires, use dry chemical, carbon dioxide, or water spray. For large fires, use dry chemical, carbon dioxide, alcohol-resista foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

**Autoignition Temperature:** Not applicable.

**Flash Point:** Not applicable. (Estimated) Health: 3; Flammability: 0; Reactivity: 0 Explosion Limit Lower: Not available. Upper: Not available.

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**Section 6 - Accidental Release Measures**
General Information: Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks: Avoid runoff into storm sewers and ditches which lead to waterways. Clean up sp
immediately, observing precautions in the Protective Equipment section. Sweep up, then place i
a suitable container for disposal. Avoid generating dusty conditions. Remove all sources of igniti
Provide ventilation. Do not get water inside containers.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Wash hands before eating. Minimize dust generatio
and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do
ingest or inhale. Do not allow contact with water. Wash clothing before reuse. Discard
contaminated shoes.
Storage: Keep away from sources of ignition. Store in a tightly closed container. Keep from
contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatibl
substances. Corrosives area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an
eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations
low.
Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amonium Oxalate, Monohydrate</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

OSHA Vacated PELs: Amonium Oxalate, Monohydrate: No OSHA Vacated PELs are listed for
this chemical.

Personal Protective Equipment
Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by
OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European
Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator whe
necessary.

Section 9 - Physical and Chemical Properties

Physical State: Solid
Appearance: colourless
Odor: odorless
pH: 6.4 @ 0.1M
Vapor Pressure: Not applicable.
Vapor Density: 4.3
Evaporation Rate:
Viscosity: Not available.
Boiling Point: Decomposes.
Freezing/Melting Point: Decomposes.
Decomposition Temperature: 70 deg C
Solubility: Slightly soluble in water.
Specific Gravity/Density: 1.5
Molecular Formula: C2H8N2O4.H2O
Molecular Weight:

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Incompatible materials, ignition sources, dust generation, acids, excess heat, strong oxidants.
Incompatibilities with Other Materials: Sodium hypochloride + ammonium acetate.
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitric oxide (NOx) and ammonia (NH3) fumes.
Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 6009-70-7 unlisted.
LD50/LC50:
Not available.

Carcinogenicity:
CAS# 6009-70-7: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: No information available.
Other Studies: No data available.

Section 12 - Ecological Information

Ecotoxicity: Not available.
Environmental Fate: Not available.
Physical/Chemical: Not available.
Other: Not available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants: None listed.
RCRA D-Series Chronic Toxicity Reference Levels: None listed.
RCRA F-Series: None listed.
RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information
## Section 15 - Regulatory Information

### US FEDERAL

**TSCA**
CAS# 6009-70-7 is not on the TSCA Inventory. It is a hydrate and exempt from TSCA Inventory requirements (40CFR720.3(u)(2)).

**Health & Safety Reporting List**
None of the chemicals are on the Health & Safety Reporting List.

**Chemical Test Rules**
None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**
None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**
None of the chemicals in this material have a SNUR under TSCA.

**SARA**

**Section 302 (RQ)**
CAS# 6009-70-7: final RQ = 5000 pounds (2270 kg) (Listed under 'Ammonium oxalate')

**Section 302 (TPQ)**
None of the chemicals in this product have a TPQ.

**SARA Codes**
CAS # 6009-70-7: acute, chronic.

**Section 313**
No chemicals are reportable under Section 313.

**Clean Air Act:**
This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**
CAS# 6009-70-7 is listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**
None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**
CAS# 6009-70-7 can be found on the following state right to know lists: California, New Jersey,
Pennsylvania, Massachusetts.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations
European Labeling in Accordance with EC Directives
Hazard Symbols:
C

Risk Phrases:
R 34 Causes burns.

Safety Phrases:
S 2 Keep out of reach of children. S 24/25 Avoid contact with skin and eyes.

WGK (Water Danger/Protection)
CAS# 6009-70-7: 1

Canada

None of the chemicals in this product are listed on the DSL/NDSL list. This product has a WHM classification of D1B, E.
CAS# 6009-70-7 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

Section 16 - Additional Information

MSDS Creation Date: 6/01/1995
Revision #8 Date: 9/14/1998
The information above is believed to be accurate and represents the best information currently available to us. However, make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

Need help with a product? Send email to Fisher's customer service or call us at 1-800-766-701