1. Identification of the substance/preparation and of the company/undertaking

**Product name**: Amiloride, Hydrochloride  
**Catalog #**: 129876  
**Supplier**: EMD Biosciences, Inc.  
10394 Pacific Center Court  
San Diego, CA 92121  
PHONE: (858)450-5558/(800)854-3417  
FAX: (858)453-3552

**Chemical formula**: C₆H₈ClN₇O · HCl

**Synonym**: N-AMIDINO-3,5-DIAMINO-6-CHLOROPYRAZINECARBOXAMIDE MONOHYDROCHLORIDE

**Emergency telephone number**: Call Chemtrec®  
(800)424-9300 (within U.S.A.)  
(703)527-3887 (outside U.S.A.)

2. Composition / information on ingredients

**Chemical name**  
1) Amiloride, Hydrochloride

<table>
<thead>
<tr>
<th>Chemical name*</th>
<th>CAS No.</th>
<th>EC Number</th>
<th>Symbol</th>
<th>R-Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amiloride, Hydrochloride</td>
<td>2016-88-8</td>
<td>217-958-2</td>
<td>T</td>
<td>R25</td>
</tr>
</tbody>
</table>

3. Hazards identification

**Physical/chemical hazards**: Not applicable.

**Human health hazards**: WARNING!  
HARMFUL IF SWALLOWED.  
MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: BLOOD, GASTROINTESTINAL TRACT, SKIN, HEAD, MUSCLE TISSUE.

4. First-aid measures

**Inhalation**: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion**: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Skin Contact**: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Eye Contact**: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

**Effects and symptoms**  
**Ingestion**: Very hazardous in case of ingestion. May be fatal if swallowed.

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

5. Fire-fighting measures

**Flammability of the Product**: Non-flammable.

**Extinguishing Media**  
**Suitable**: Not applicable.

**Special fire-fighting procedures**: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
6. Accidental release measures

Personal precautions: Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Small Spill and Leak: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill and Leak: Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

7. Handling and storage

Handling: Keep locked up. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 20°C (68°F).

Packaging materials: Use original container.

Recommended use: Use original container.

8. Exposure controls/personal protection

Engineering measures: Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Hygiene measures: Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Ingredient Name | Occupational Exposure Limits
---|---
1) Amiloride, Hydrochloride | Not available.

Personal protective equipment

Respiratory system: Wear appropriate respirator when ventilation is inadequate.

Skin and body: Lab coat.

Eyes: Safety glasses.

Protective Clothing (Pictograms)

9. Physical and chemical properties

Physical state: Solid.

Color: Yellow. (Light.)

Molecular Weight: 266.1 g/mole

Melting Point: 293°C (559.4°F)

Solubility: Easily soluble in cold water.

Flash point: Not applicable.

Explosive properties: Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

10. Stability and reactivity

Stability: The product is stable.

Conditions to avoid: Sensitive to light.

11. Toxicological information

RTECS #: UQ2275500

Local effects

Skin irritation: Not available.

Acute toxicity: LD50: Not available. LC50: Not available.

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

Catalog #: 129876
### 12. Ecological information

- **Ecotoxicity**: Not available.
- **Toxicity of the Products of Biodegradation**: The products of degradation are as toxic as the product itself.

### 13. Disposal considerations

- **Methods of disposal; Waste of residues; Contaminated packaging**: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### 14. Transport information

**International transport regulations**
- **UN number**: UN2811

**Land - Road/Railway**
- **Proper shipping name**: Toxic solid, organic, n.o.s.*
- **ADR/RID Class**: CLASS 6.1: Toxic substance.
- **Packing Group**: II
- **ADR/RID label**:

**Sea**
- **Proper shipping name**: Toxic solid, organic, n.o.s.*
- **IMDG Class**: CLASS 6.1: Toxic substance.
- **Packing Group**: II
- **IMDG label**:

**Air**
- **Proper shipping name**: Toxic solid, organic, n.o.s.*
- **UN/ID Number**: UN2811
- **IATA-DGR Class**: CLASS 6.1: Toxic substance.
- **IATA label**:

- **Special Provisions for Transport**: Not available.
15. Regulatory information

EU Regulations

Classification: Toxic
Risk Phrases: R25- Toxic if swallowed.
Safety Phrases: S36- Wear suitable protective clothing.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains: Amiloride, Hydrochloride

U.S. Federal Regulations

TSCA: No products were found.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311 toxic chemical notification and release reporting: No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean air act (CAA) 112 accidental release prevention: No products were found.
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: No products were found.

HCS Classification:
CLASS: Toxic.
CLASS: Target organ effects.

State Regulations:

WHMIS (Canada)
CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC).
No products were found.

16. Other information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
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<tbody>
<tr>
<td>0</td>
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National Fire Protection Association (U.S.A.)

<table>
<thead>
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<th>Health</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Specific Hazard</th>
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Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Date of issue
Catalog # 129876
3/4/2003