

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Murexide Indicator, 0.1% (w/w) in Ammonium Chloride

Product Number R5219000

Other Identifying Product Numbers R5219000-100A6

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company

Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

| Hazard Class | Category | Hazard Statements | Precautionary Statements |
|-------------------------------------|-----------------------------|-------------------|-------------------------------------|
| Acute Toxicity - Oral | Category 4 | H302 | P264,P270,P301+P312,P330,P501 |
| Serious Eye Damage / Eye Irritation | Category 2 | H319 | P264,P280,P305+P351+P338, P337+P313 |
| Combustible Dust | Category 1 - Combustible | | |

2.2. GHS Label Elements

Pictograms:



Signal Word: **Warning**

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

| Hazard Number | Hazard Statement |
|---------------|---|
| H302 | Harmful if swallowed |
| H319 | Causes serious eye irritation |
| | May form combustible dust concentrations in air |

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

| Precautionary Number | Precautionary Statement |
|----------------------|---|
| P264 | Wash hands, arms, and face thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P280 | Wear protective gloves and eye protection. |

Response

| Precautionary Number | Precautionary Statement |
|----------------------|--|
| P301+P312 | IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P330 | Rinse mouth. |
| P337+P313 | If eye irritation persists: Get medical advice or attention. |

Disposal

| Precautionary Number | Precautionary Statement |
|----------------------|---|
| P501 | Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations. |

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

100 percent of this mixture consists of ingredient(s) of unknown acute inhalation toxicity.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

| Chemical Name (IUPAC) | Common Name and Synonyms | CAS Number | Weight% |
|---|------------------------------|------------|---------|
| ammonium chloride | Ammonium Chloride | 12125-02-9 | 99.90 |
| azanium 2,4-dioxo-5- [[2,4,6-trioxo-1,3-diazinan-5-ylidene)amino]-1H-pyrimidin-6-olate | Murexide; Ammonium purpurate | 3051-09-0 | 0.10 |

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures



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Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Ingestion: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: May cause irritation, dermatitis, redness and pain. May be absorbed through skin on prolonged exposure.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if swallowed Causes irritation to eyes. May cause irritation to the skin and respiratory tract. Wash areas of contact with water. Call a physician if irritation develops. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, dermatitis, redness and pain. May be absorbed through skin on prolonged exposure.

4.3. Immediate Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use extinguishing media appropriate for surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment and Precautions for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Small amounts may be flushed to the drain with excess water.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from physical damage. Keep in tightly closed containers in a cool, dry area.

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SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

| Chemical Name | CAS Number | Exposure Limit |
|-------------------|------------|----------------------------------|
| Ammonium Chloride | 12125-02-9 | 20 mg/m ³ STEL (fume) |

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

| Chemical Name | CAS Number | Exposure Limit |
|-------------------|------------|---------------------------------|
| Ammonium Chloride | 12125-02-9 | 10 mg/m ³ TWA (fume) |

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: A system of local or general exhaust is recommended. If necessary, wear a dust mask respirator to minimize exposure to dust particles.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.



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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

| | |
|---|---------------------------------------|
| Physical State: | solid |
| Color: | Rose-pink |
| Odor: | odorless |
| Odor Threshold: | Data not available. |
| Melting/Freezing Point: | 337.8°C (with decomposition) |
| Boiling Point/Range: | 520°C |
| Flammability: | Data not available. |
| Flammability/Explosive Limits: | Data not available. |
| Flash Point: | Data not available. |
| Auto-Ignition Temperature: | Data not available. |
| Decomposition Temperature: | Data not available. |
| pH: | 5.0 - 5.5 (1 - 10% aqueous solutions) |
| Kinematic Viscosity: | Data not available. |
| Solubility: | 292 g/L at 20°C |
| Vapor Pressure: | 1.3 hPa at 30°C |
| Evaporation Rate: | 0 (butyl acetate = 1) |
| Relative Density: | 1.53 |
| Relative Vapor Density: | 1.9 |
| Particle Characteristics: | Data not available. |
| Partition Coefficient n-octanol/water, log | Data not available. |

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Acids, bases, silver salts. Reacts explosively with potassium chlorate or bromine trifluoride and violently with bromine pentafluoride, ammonium compounds, nitrates and iodine heptafluoride.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Oral acute toxicity estimate (ATE): 500 mg/kg(calculated)

| Chemical Name | CAS Number | Toxicity |
|-------------------|------------|--|
| Ammonium Chloride | 12125-02-9 | Oral LD50 Acute Toxicity Estimate 500 mg/kg (Source: Canada_WHMIS) |

Acute Toxicity - Dermal Exposure:

Not acutely toxic.

| Chemical Name | CAS Number | Toxicity |
|-------------------|------------|--|
| Ammonium Chloride | 12125-02-9 | Dermal LD50 Rat >2000 mg/kg (Source: ECHA_API) |

Acute Toxicity - Inhalation Exposure:

No information found.

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

| Chemical Name | CAS Number | Classification |
|---------------|------------|----------------|
| | | No data found. |

National Toxicology Program (NTP)

| Chemical Name | CAS Number | Classification |
|---------------|------------|----------------|
| | | No data found. |

U.S. OSHA specifically regulated carcinogens

| Chemical Name | CAS Number | Classification |
|---------------|------------|----------------|
| | | No data found. |

11.3 Additional Toxicology Information:

Harmful if swallowed. Causes serious eye irritation.

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SECTION 12: Ecological Information

12.1. Ecotoxicity

| Chemical Name | CAS Number | Species | Exposure | Toxicity |
|-------------------|------------|-----------------|----------|---|
| Ammonium Chloride | 12125-02-9 | Freshwater Fish | Acute | LC50 96 h Cyprinus carpio 209 mg/L [static] |

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT regulations.



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14.2 Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG regulations.

SECTION 15: Regulatory Information

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15.01. Occupational Safety and Health Administration (OSHA) Hazards

| Chemical Name | CAS Number | Regulatory Information |
|----------------|------------|------------------------|
| No data found. | | |

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

| Chemical Name | CAS Number | RQ |
|----------------|------------|----|
| No data found. | | |

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

| Chemical Name | CAS Number | Regulatory Information |
|-------------------|------------|------------------------------------|
| Ammonium Chloride | 12125-02-9 | 5000 lb final RQ; 2270 kg final RQ |

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

| Chemical Name | CAS Number | List | Regulatory Information |
|-------------------|------------|--------------------|--|
| Ammonium Chloride | 12125-02-9 | Emission Reporting | "1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)" As Aqueous ammonia from water dissociable ammonium salts and other sources [RR-47925-4] |

15.05. Massachusetts Right-to-Know Substance List

| Chemical Name | CAS Number | Regulatory Information |
|-------------------|------------|--------------------------|
| Ammonium Chloride | 12125-02-9 | Present (including fume) |

15.06. Pennsylvania Right-to-Know Hazardous Substances

| Chemical Name | CAS Number | Regulatory Information |
|-------------------|------------|------------------------|
| Ammonium Chloride | 12125-02-9 | Environmental hazard |

15.07. New Jersey Worker and Community Right-to-Know Components

| Chemical Name | CAS Number | Regulatory Information |
|-------------------|------------|------------------------|
| Ammonium Chloride | 12125-02-9 | sn 0093 |

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15.08. California Proposition 65

| Chemical Name | CAS Number | Regulatory Information |
|---------------|------------|------------------------|
| | | No data found. |

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

| Chemical Name | CAS Number | List | Status |
|-------------------|------------|------|---------|
| Ammonium Chloride | 12125-02-9 | DSL | Present |
| Murexide | 3051-09-0 | DSL | Present |

15.10. United States of America Toxic Substances Control Act (TSCA) List

| Chemical Name | CAS Number | Status |
|-------------------|------------|------------------|
| Ammonium Chloride | 12125-02-9 | Present (ACTIVE) |
| Murexide | 3051-09-0 | Present (ACTIVE) |

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

| Chemical Name | CAS Number | List | Number |
|-------------------|------------|--------|-----------|
| Ammonium Chloride | 12125-02-9 | EINECS | 235-186-4 |
| Murexide | 3051-09-0 | EINECS | 221-266-6 |

15.12. China - Inventory of Existing chemical Substances (IECSC)

| Chemical Name | CAS Number | Status |
|-------------------|------------|-----------------|
| Ammonium Chloride | 12125-02-9 | Present [24013] |
| Murexide | 3051-09-0 | Present [23463] |

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

| Chemical Name | CAS Number | List | Status |
|-------------------|------------|---------|--------------------|
| Ammonium Chloride | 12125-02-9 | Annex 1 | Present [KE-01645] |

15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

| Chemical Name | CAS Number | MITI No. |
|-------------------|------------|----------|
| Ammonium Chloride | 12125-02-9 | (1)-218 |

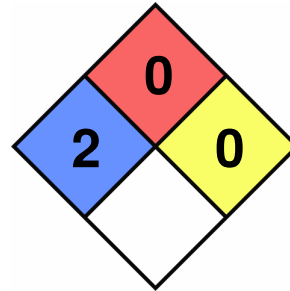
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SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 2
Flammability: 0
Reactivity: 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
2026-05-06

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.