MATERIAL SAFETY DATA SHEET

This form may be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. To be valid, all information required by §1910.1200(g) of the Standard must appear on this form. Consult the Standard for specific requirements. Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

IDENTITY (As Used on Label and List)

BUYER  SENTRY AMMONIA

Section I

Manufacturer's Name

PATTERSON LABORATORIES, INC.

2150 Pleasant Avenue

Detroit, Michigan 48217

Emergencies (Telephone Number)

(313) 782-2234 & (313) 283-1192

Emergency Telephone Number

(313) 843-4300

Date Printed

March 30, 1987

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical/Identity/Common Name(s))

Ammonia (AS NH3) *(Ammonia Gas)

OSHA PEL 50 PPM*, -25 PPM*

ACGIH TLV 50 PPM*

Recommendation N/A

% (optional)

Section III — Physical/Chemical Characteristics

Boiling Point

191-212

Degrees F.

Specific Gravity (H2O = 1)

0.9890

Vapor Pressure (mm Hg)

N/A

Melting Point

N/A

Vapor Density (AIR = 1)

N/A

Evaporation Rate

1

Solubility in Water

Complete

Appearance and Odor

Clear, cloudy white or colored liquid with distinct ammonia odor.

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)

Non-flammable

Flammable Limits

LEL 16%

UEL 27%

Explosive Limits

Non-explosive

Special Fire Fighting Procedures

If possible, move product from fire area. Cool fire-exposed containers with water spray.

Unusual Fire and Explosion Hazards

Negligible fire and explosion hazard, however, if ammonia is evolved, it is flammable.
### Section V - Reactivity Data

<table>
<thead>
<tr>
<th>Substance</th>
<th>Lewis Structure</th>
<th>Conditions to Avoid</th>
<th>Decomposition or Byproducts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Heat</td>
<td>Toxic oxides of nitrogen and ammonia gas.</td>
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<tr>
<td></td>
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<td></td>
<td>chlorine, bromine, iodine, hypochlorite, mineral acids;</td>
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<td>violent reactions may occur with incompatible materials, releasing irritating or toxic gases.</td>
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</table>

### Section VI - Health Hazard Data

<table>
<thead>
<tr>
<th>Route(s) of Entry</th>
<th>Ingestion?</th>
<th>Skin?</th>
<th>Inhalation?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Likely</td>
<td>Unlikely</td>
<td>Likely</td>
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</table>

**Health Hazards (Acute and Chronic) (ACUTE) Based on the testing of this product in animals, it is both an eye and skin irritant (rabbit) and toxic by ingestion (rat). (CHRONIC) Not determined on this product.**

**Carbofuran:** N/A IARC Monograph? N/A OSHA PEL? N/A

Not determined for finished product or ammonia (NH₃), the hazardous component, in the product.

**Signs and Symptoms of Exposure**

- **Ammonia (as NH₃)** is the hazardous ingredient in the finished product. The effects described represent the "worst case" scenario.

  **INHALATION:** Mild exposure to ammonia vapors may cause irritation of the nose, throat, coughing and sneezing. A more severe exposure may cause respiratory irritation, dyspnea, pulmonary edema. Repeated or prolonged exposure to vapors may cause, in addition to irritation, bronchitis and pneumonia. **INGESTION:** May cause excessive salivation, nausea, vomiting, gastric irritation with chances of perforation. Ingestion of large quantities may produce CNS depression, shock and convulsions. **SKIN:** Powerful irritant, may cause severe burning pain and corrosive damage. Repeated or prolonged exposure may cause dermatitis. **EYES:** Powerful irritant, may cause conjunctivitis, swelling of eyelids, chemical burns, transient corneal damage, repeated or prolonged exposure may cause cataracts and retinal atrophy.

**Medical Conditions Generally Aggravated by Exposure**

None Known

**Emergency and First Aid Procedures**

**EYES:** Immediately flush eyes with running water for at least 15 minutes. Get prompt medical attention. **SKIN:** Rinse well with running water. If irritation persists, contact physician or local poison control center. **INHALATION:** Remove victim to fresh air. Provide
symptomatic and supportive care. Contact physician or local poison control center. INGESTION-Immediately give large quantities of water or milk to dilute. Do not induce vomiting. Get prompt medical attention.

Section VII — Precautions for Safe Handling and Use

Eye Protection—Avoid eye contact. Wear protective safety goggles or face shield. Skin Protection—Avoid prolonged or repeated skin contact. Wear protective gloves. Respiratory Protection—Keep upwind of spill. Avoid breathing vapors. Use NIOSH approved respirator that will provide protection from ammonia gas. If ammonia vapors >300 PPM use self-contained breathing apparatus with full face shield.

Disperse with water and flush to sewer in accordance with Federal, State and Local Environmental regulations.

Precautions to be Taken in Handling and Storing
Do not mix with other household chemicals, such as bleach, automatic toilet bowl cleaners, wall or tile cleaners.
Store in cool, ventilated area. Keep out of direct sunlight. Avoid overheating, plastic bottle will bulge from ammonia vapor pressure.

Other Precautions None

Section VIII — Control Measures

NIOSH approved respirator or breathing apparatus with face shield.

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<thead>
<tr>
<th>Ventilation</th>
<th>Local Exhaust</th>
<th>Special</th>
<th>N/A</th>
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Other Protective Clothing or Equipment

Wear protective gloves

Wear safety goggles or face shield

Provide eye bath and emergency shower. Launder work clothing when soiled.

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