SECTION I. IDENTIFICATION OF PRODUCT

CHEMICAL NAME
Ammonium Hydroxide

FORMULA
$\text{NH}_4\text{OH}$

SYNONYM OR CROSS REFERENCE
Agua-Ammonia

SECTION II. HAZARDOUS INGREDIENTS

MATERIAL
Ammonium Hydroxide

NATURE OF HAZARD
Corrosive

SECTION III. PHYSICAL DATA

BOILING POINT
Decomposes

MELTING POINT
$-69.2^\circ\text{C}$

PRESSURE (mm Hg)
570

SPECIFIC GRAVITY
0.90

VAPOR DENSITY (AIR = 1)
1.2

PERCENT VOLATILE BY VOLUME (%)
100

WATER SOLUBILITY
Complete

EVAPORATION RATE
(ether $= 1$) greater than 1

APPEARANCE
Clear colorless liquid with a pungent odor

SECTION IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (method used)
NA

FLAMMABLE LIMITS
NA

FIRE EXTINGUISHING MEDIA
NA

SPECIAL FIRE-FIGHTING PROCEDURES
Wear self-contained breathing apparatus

UNUSUAL FIRE AND EXPLOSION HAZARD
Emits toxic fumes of ammonium

SECTION V. HEALTH HAZARD

Threshold Limit Value
25 ppm

Health Hazards
Vapor irritating to skin, eyes and mucous membrane

FIRST AID PROCEDURES
Ingestion: do not induce vomiting. Give water, diluted vinegar or orange juice. Contact a physician.
Inhalation: remove to fresh air. Give artificial respiration if necessary.
Skin & eyes: Flush with water for at least 15 minutes. Contact a physician.
SECTION VI. REACTIVITY DATA

STABILITY

<table>
<thead>
<tr>
<th>UNSTABLE</th>
<th>CONDITIONS TO AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEADY   X</td>
<td></td>
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</tbody>
</table>

INCOMPATIBILITY (materials to avoid): Iodine, strong acids, silver compounds, mercury compounds, dimethyl sulfate.

HAZARDOUS DECOMPOSITION PRODUCTS
Emits toxic fumes of ammonia

HAZARDOUS POLYMERIZATION

<table>
<thead>
<tr>
<th>MAY OCCUR</th>
<th>CONDITIONS TO AVOID</th>
</tr>
</thead>
<tbody>
<tr>
<td>WILL NOT OCCUR X</td>
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SECTION VII. SPILL AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Neutralize with dilute acetic acid. Soak up neutralized liquid with vermiculite and place in a suitable container.

WASTE DISPOSAL METHOD
DISPOSE OF BY MEANS AS TO COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS OR CONTACT AN APPROVED AND LICENSED DISPOSAL AGENCY.

SECTION VIII. PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)
• Self-contained breathing apparatus

VENTILATION

<table>
<thead>
<tr>
<th>LOCAL</th>
<th>SPECIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MECHANICAL (general) fume hood</td>
<td>OTHER</td>
</tr>
</tbody>
</table>

PROTECTIVE GLOVES
rubber

EYE PROTECTION
safety glasses or face shield

OTHER PROTECTIVE EQUIPMENT
rubber apron

SECTION IX. HANDLING AND STORAGE PRECAUTIONS

STORAGE AND HANDLING

SECTION X. MISCELLANEOUS INFORMATION

INFORMATION FURNISHED BY:
Gaston L. Pillori

TITLE: Manager of Quality Assurance

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