

# **MATERIAL SAFETY DATA SHEET**

## **MultiTest: Ammonia**

### **Section I: MANUFACTURER'S NAME, ADDRESS, AND CONTACT INFORMATION**

Seachem Laboratories, Inc.  
1000 Seachem Drive  
Madison, GA 30650

Emergency Telephone Number: 706-343-6060  
Telephone Number for Information: 706-343-6060  
Date Prepared: 24 April 2007

MultiTest: Ammonia contains ammonia sensors, total ammonia reagent, and ammonia reference solution. The MSDS for these three products are attached.

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## **Ammonia Sensor for MultiTest: Ammonia**

### **Section I: MANUFACTURER'S NAME, ADDRESS, AND CONTACT INFORMATION**

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The ammonia sensor for MultiTest: Ammonia is an article as defined in CFR 1910.1200 (c); therefore it is exempt under CFR 1910.1200 (b) (6) (v). No material safety data sheet is required for this product.

## MATERIAL SAFETY DATA SHEET

### Total Ammonia Reagent for MultiTest: Ammonia

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Madison, GA 30650

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#### SECTION II: CHEMICAL INGREDIENTS/IDENTITY INFORMATION

Components (Chemical Identity; Common Names(s))	OSHA PEL	ACGIH TLV	Other Limits
Strong aqueous solution of caustic soda.	2 mg/m <sup>3</sup> ceiling	2 mg/m <sup>3</sup> ceiling	NA

#### SECTION III: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	105° C	Specific Gravity (H <sub>2</sub> O = 1)	1.11
Vapor Pressure (mm Hg)	ND	Melting Point	-10° C
Vapor Density (AIR = 1)	ND	Evaporation Rate (Butyl Acetate = 1)	ND
Solubility in Water	Soluble	Appearance and Odor	Colorless, odorless clear solution

#### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	NA
Flammable Limits	NA
LEL	NA
UEL	NA
Extinguishing Media	Any
Special Fire Fighting Procedures	Wear full protective clothing and NIOSH-approved self contained breathing apparatus with full facepiece operated in pressure demand or positive pressure mode.
Unusual Fire and Explosion Hazards	May cause fire and explosions when in contact with incompatible materials.

## SECTION V: REACTIVITY DATA

Stability	Stable under normal conditions of use
Conditions to Avoid	Heat, incompatibles
Incompatibility (Materials to Avoid)	Acids, organic halogen compounds, especially trichloroethylene may cause violent reactions. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts. Contact with metals such as aluminum, magnesium, tin, and zinc causes formation of flammable hydrogen gas. Reaction with sugars produces carbon monoxide.
Hazardous Decomposition or Byproducts	Sodium oxide, which can decompose by reaction with certain metals to produce flammable and explosive hydrogen gas.
Hazardous Polymerization	Will Not Occur
Polymerization Conditions to Avoid	None

## SECTION VI: HEALTH HAZARD DATA

Route(s) of Entry: Inhalation, ingestion, skin, eyes
Health Hazards (Acute): Inhalation-Mist is a severe irritant, and may result in damage to upper respiratory tract. Symptoms may include sneezing, sore throat or runny nose. Severe pneumonitis may occur. Ingestion-Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, fall in blood pressure. Damage may appear days after exposure. Skin-Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures. Eyes-Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness. (Chronic): Prolonged contact has a destructive effect upon tissue.
Carcinogenicity: NA
Signs and Symptoms of Exposure: See health hazards above.
Medical Conditions Generally Aggravated by Exposure: No information found.
Emergency and First Aid Procedures: Inhalation-Remove to fresh air, if not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician. Ingestion-DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Get medical attention immediately. Skin-Flush immediately with water and continue for at least 15 minutes while removing contaminated clothing and shoes. Call a physician immediately. Wash clothing before reuse. Eyes-Immediately flush eyes with water and continue for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE**

Steps to Be Taken in Case Material is Released or Spilled: Dilute with water and neutralize with diluted acid such as acetic (vinegar), hydrochloric, or sulfuric acids. Use of Seachem Laboratories Acid Buffer is recommended. When fully diluted and neutralized, flush to drain.
Waste Disposal Method: No special disposal method required, except that it be in accordance with current local authority regulations.
Precautions to Be Taken in Handling and Storing: Do not introduce to drinking water or foodstuffs. Store tightly sealed.
Other Precautions: All materials should be handled under good housekeeping practices.

**SECTION VIII: CONTROL MEASURES**

Respiratory Protection	Not required
Ventilation	Local exhaust
Protective Gloves	Recommended
Eye Protection	Recommended
Other Protective Clothing or Equipment	None
Work/Hygienic Practices	Good housekeeping practices

**ABBREVIATIONS**

- ACGIH: The American Conference of Governmental Industrial Hygienists, Inc.
- IARC: The International Agency for Research on Cancer
- LEL: Lower Explosive Limit (or Lower Flammable Limit)
- NA: Not Applicable
- ND: Not Determined
- NTP: The National Toxicology Program
- OSHA: The Occupational Health and Safety Administration
- PEL: Permissible Exposure Limit
- TLV: Threshold Limit Value
- UEL: Upper Explosive Limit (or Upper Flammable Limit)

# MATERIAL SAFETY DATA SHEET

## Ammonia Reference Solution for MultiTest: Ammonia

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1000 Seachem Drive                              Telephone Number for Information: 706-343-6060  
Madison, GA 30650                                Date Prepared: 24 April 2007

### SECTION II: CHEMICAL INGREDIENTS/IDENTITY INFORMATION

Components (Chemical Identity; Common Names(s))	OSHA PEL	ACGIH TLV	Other Limits
Proprietary aqueous solution of an ammonium salt.	NA	NA	NA

### SECTION III: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	ND	Specific Gravity (H <sub>2</sub> O = 1)	0.99
Vapor Pressure (mm Hg)	23.8@25 ° C	Melting Point	NA
Vapor Density (AIR = 1)	<1 H <sub>2</sub> O	Evaporation Rate (Butyl Acetate = 1)	0.3
Solubility in Water	Soluble	Appearance and Odor	Clear odorless liquid

### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	NA
Flammable Limits	NA
LEL	NA
UEL	NA
Extinguishing Media	NA
Special Fire Fighting Procedures	NA
Unusual Fire and Explosion Hazards	NA

### SECTION V: REACTIVITY DATA

Stability	Stable under normal conditions of use
Conditions to Avoid	Excessive heat
Incompatibility (Materials to Avoid)	None
Hazardous Decomposition or Byproducts	May emit ammonia if heated
Hazardous Polymerization	Will Not Occur
Polymerization Conditions to Avoid	None

**SECTION VI: HEALTH HAZARD DATA**

Route(s) of Entry: Ingestion, inhalation, skin, eyes
Health Hazards (Acute): Large oral doses may cause irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. It presents little toxicity unless large amounts are ingested, in which case, vomiting and diarrhea are likely. Inhalation may cause irritation to the respiratory tract. Symptoms may include coughing and sneezing. May irritate skin and eyes, with redness, itching, and pain as symptoms. No information found on hazards of chronic exposure.
Carcinogenicity: NA
Signs and Symptoms of Exposure: See health hazards above.
Medical Conditions Generally Aggravated by Exposure: No information found
Emergency and First Aid Procedures: Ingestion-induce vomiting immediately as directed by medical personnel. Seek medical attention. Inhalation-remove to fresh air. Skin-Flush with water for at least 15 minutes, while removing contaminated clothing and shoes. Wash clothing and clean shoes thoroughly before reuse. Eyes-Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention.

**SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE**

Steps to Be Taken in Case Material is Released or Spilled: Dilute with water and flush to drain.
Waste Disposal Method: No special disposal method required, except that it be in accordance with current local authority regulations.
Precautions to Be Taken in Handling and Storing: Do not introduce to drinking water or foodstuffs. Wash hands after use, wear gloves if exposure is prolonged.
Other Precautions: All materials should be handled under good housekeeping practices.

**SECTION VIII: CONTROL MEASURES**

Respiratory Protection	Not required
Ventilation	Not required
Protective Gloves	Recommended
Eye Protection	Recommended
Other Protective Clothing or Equipment	None
Work/Hygienic Practices	Good housekeeping practices

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