


# The Home Scientist, LLC

Material Safety Data Sheet

4231 Witherow Road  
Winston-Salem, NC 27106-2945  
(336) 725-4549

MSDS #: CA02  
Effective Date: May 15, 2011

SECTION I NAME		24 HOUR EMERGENCY ASSISTANCE				
Product:	Ammonia, 6.0 M (6.0 N) solution	<b>NFPA</b> 	<b>CHEMTREC</b> (800) 424-9300	<b>HMS*</b>		
Chemical Synonyms:	Ammonium hydroxide, 6.0 M solution			<b>Health: 2</b>		
Formula:	Mixture. See Section II.			<b>Fire: 0</b>		
Unit Size:	up to 1.000 liter			<b>Reactivity: 1</b>		
CAS #:	Mixture. See Section II.	<b>Hazard Rating</b>				
		<b>Minimal</b> 0	<b>Slight</b> 1	<b>Moderate</b> 2	<b>Serious</b> 3	<b>Severe</b> 4

SECTION II INGREDIENTS OF MIXTURES			
Principal Component(s)	Percentage	Hazardous?	TLV Units
Ammonia, NH <sub>3</sub> (CAS #: 1336-21-6)	~12% as NH <sub>3</sub>	Yes	25 ppm in air as NH <sub>3</sub>
Water, H <sub>2</sub> O (CAS #: 7732-18-5)	~88%	No	None established

**DANGER! CORROSIVE!**  
**CAUSES SEVERE BURNS. MAY BE FATAL IF SWALLOWED OR INHALED. VAPOR EXTREMELY IRRITATING.**

SECTION III PHYSICAL DATA			
Melting Point (°F):	0 °C (32 °F)	Specific Gravity (H <sub>2</sub> O = 1):	~1.0
Boiling point (°F):	~ 100 °C (212 °F)	Percent Volatile by Volume (%):	100%
Vapor Pressure (mm of Hg):	14 mm (water)	Evaporation Rate (Water = 1):	> 1
Vapor Density (Air = 1):	0.7 (water)		
Solubility in Water:	Complete		
Appearance & Odor:	Clear, colorless liquid; pungent, biting ammonia odor		

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method Used)	N/A	Flammable Limits in Air % by Volume	Lower 16 Upper 25
Extinguisher Media	Use any media for extinguishing the supporting fire.		

### SPECIAL FIREFIGHTING PROCEDURES

Wear full protective clothing with respirator mask with ammonia cannister, or NIOSH/MSHA-approved self-contained breathing apparatus.

(2004 EMERGENCY RESPONSE GUIDEBOOK, RSPA P 5800.9, GUIDE PAGE NO. 154)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition. Fire may produce irritating, corrosive, and/or toxic fumes. Auto-ignition temperature 651 °C (1204 °F)

**D.O.T. Ammonia solutions, 8, UN2672, PG III, Ltd Qty ≤ 5 Lt.**

## SECTION V

## HEALTH HAZARD DATA

CA02

<b>THRESHHOLD LIMITED VALUE</b>	As ammonia gas TWA: 25 ppm; STEL: 35 ppm (ACGIH 2001). Toxicity data: oral-rat LD50: 350 mg/kg.
<b>EFFECTS OF OVEREXPOSURE</b>	Material is extremely destructive to tissue of the mucous membranes, upper respiratory, gastrointestinal and digest tract, eyes, and skin. Inhalation may be fatal as a result of spasm, inflammation, and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of overexposure may include burning sensation, shortness of breath, headache, nausea, vomiting, convulsions, and shock. Target organs: Eyes, skin, and mucous membranes.
<b>EMERGENCY AND FIRST AID PROCEDURES</b>	<b>INGESTION:</b> Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. <b>EYES:</b> Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention. <b>SKIN:</b> Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. <b>INHALATION:</b> Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

## SECTION VI

## REACTIVITY DATA

<b>Stability</b>	Unstable	X	<b>Conditions to Avoid</b>	Excessive temperature
	Stable			
<b>Incompatibility (Materials to Avoid)</b>	Acids, strong oxidizing agents, halogens, heavy metals.			
<b>Hazardous Decomposition Products</b>	Decomposes to ammonia gas, and above 450 °C (842 °F) to hydrogen gas and nitrogen oxides.			
<b>Hazardous Polymerization</b>	<b>Conditions to Avoid</b> Not applicable.			
<b>May Occur</b>				
	X			

## SECTION VII

## SPILL OR LEAK PROCEDURES

<b>Steps to be taken in case material is released or spilled</b>	Wearing protective equipment, neutralize with a weak acid such as sodium bisulfate. Absorb with inert dry material and place in suitable container for proper disposal.
<b>Waste Disposal Method</b>	Discharge, treatment, or disposal may be subject to Federal, State, or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Dispose of in accordance with all applicable federal, state, and local laws and regulations.

## SECTION VIII

## SPECIAL PROTECTION INFORMATION

<b>Respiration Protection (Specify Type)</b>	Work in a fume hood or wear a NIOSH/MSHA-approved respirator with ammonia cannister if necessary.			
<b>Ventilation</b>	<b>Local Exhaust</b>	Recommended	<b>Special</b>	No
	<b>Mechanical (General)</b>	Recommended	<b>Other</b>	No
<b>Protective Gloves</b>	Rubber	<b>Eye Protection</b>	Chemical safety goggles	
<b>Other Protective Equipment</b>	Goggles and faceshield, eye wash station, proper gloves, ventilation hood, lab coat, apron.			

## SECTION IX

## SPECIAL PRECAUTIONS

<b>Precautions to be Taken in Handling &amp; Storing</b>	Store in a well-ventilated area away from heat, sparks, and open flame at room temperature. Isolate from incompatible substances. Wash thoroughly after handling.
<b>Other Precautions</b>	Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food, cosmetic, or household use. Keep out of reach of children. Avoid contact with eyes, skin, and mucous membranes. Avoid breathing vapor and use adequate ventilation. Remove and wash contaminated clothing.

Revision #: 1	Date: May 15, 2011	Approved: Robert Bruce Thompson	Chemical Safety Coordinator: RBT
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\* Hazardous Materials Industrial Standards