

**MSDS****Material Safety Data Sheet**

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**Ammonium Hydroxide, 28-30%**


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**SECTION 1 PRODUCT IDENTIFICATION**


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NAME: Ammonium Hydroxide, 28-30%  
 EKI ORDER NUMBERS: 1625, 1626  
 SYNONYMS: N/I  
 CAS NO: 1336-21-6  
 FORMULA: NH<sub>4</sub>OH in H<sub>2</sub>O  
 REVISION DATE: 31 March 2004

\*\*\*\*LABEL HAZARD STATEMENT AND PRECAUTIONS\*\*\*\*

DANGER! POISON! MAY BE FATAL IF SWALLOWED OR INHALED. CAUSES BURNS. Do not breathe vapor or mist. Do not get in eyes, on skin, or clothing. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling.

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**SECTION 2 HAZARDOUS INGREDIENTS / EXPOSURE LIMITS**


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INGREDIENT/CAS NO -----	OSHA PEL -----	ACGIH TLV -----
Ammonium Hydroxide/1336-21-6	50 ppm NH3 STEL	25 ppm NH3 TWA 50 ppm NH3 STEL

Ammonium Hydroxide is subject to the reporting requirements of SARA313 and 40CFR372.

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**SECTION 3 PHYSICAL / CHEMICAL CHARACTERISTICS**


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SOLUBILITY IN WATER: Miscible	BOILING POINT (C): 36
VAPOR PRESSURE (mm Hg): 115	VAPOR DENSITY: 0.60
SPECIFIC GRAVITY: 0.9	MELTING POINT (C): -72
EVAPORATION RATE: N/I	
APPEARANCE AND ODOR: Clear, colorless liquid. Odor of ammonia.	

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**SECTION 4 FIRE / EXPLOSION HAZARD DATA**


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FLASH POINT (C): N/I  
 AUTOIGNITION TEMPERATURE (C): 651  
 FLAMMABLE LIMITS (%) UEL: 25 LEL: 16  
 EXTINGUISHING MEDIA: Suitable for surrounding fire.  
 SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear self-contained breathing apparatus with full facepiece operated in pressure-demand or other positive-pressure mode.  
 UNUSUAL FIRE AND EXPLOSION HAZARDS: Flammable vapors may accumulate in confined spaces.

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## SECTION 5 REACTIVITY DATA

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STABILITY: Stable

CONDITIONS TO AVOID: Heat, sunlight, sources of ignition.

MATERIALS TO AVOID: Acids, most metals, dimethyl sulfate, halogens, silver nitrate, silver oxide, silver permanganate, propylene oxide, oleum, beta-propiolactone.

HAZARDOUS DECOMPOSITION PRODUCTS:  $\text{NH}_3$ ,  $\text{NO}_x$ .

HAZARDOUS POLYMERIZATION: Does not occur.

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## SECTION 6 HEALTH HAZARD DATA

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ROUTES OF ENTRY AND EFFECTS OF OVEREXPOSURE

INHALATION: Causes respiratory tract irritation. High concentrations can cause burns, pulmonary edema, death.

SKIN CONTACT: Causes irritation and burns.

EYE CONTACT: Vapor causes irritation. Liquid can cause burns with permanent damage.

SKIN ABSORPTION: N/I

INGESTION: May cause burns to esophagus and stomach. May be fatal.

CHRONIC: May cause damage to mucous membranes, upper respiratory tract, eyes and skin.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Eye disorders, impaired respiratory function.

CARCINOGENICITY: None

**\*\*\*\*FIRST AID PROCEDURES\*\*\*\***

**\*\*\*\*GET IMMEDIATE MEDICAL ATTENTION!\*\*\*\***

EYE CONTACT: Immediately flush with plenty of water for at least 15 minutes. Act promptly.

SKIN CONTACT: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

INGESTION: Do NOT induce vomiting. If conscious, give large quantities of water to drink.

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## SECTION 7 PRECAUTIONS FOR SAFE HANDLING AND USE

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STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED: Ventilate area. Wear suitable respirator. Neutralize with dilute acid. Absorb spill with inert material and containerize for disposal.

WASTE DISPOSAL METHOD: Dispose in accordance with all applicable federal, state, and local environmental regulations.

Store tightly closed, in a cool ventilated area.

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## SECTION 8 CONTROL MEASURES

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VENTILATION: Local preferred.

RESPIRATORY PROTECTION: Full facepiece ammonia cartridge respirator or full facepiece air-supplied positive pressure respirator.

EYE PROTECTION: Chemical splash safety goggles and/or full face shield.

SKIN PROTECTION: Neoprene gloves, lab coat and impervious apron.

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