

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: Ammonium Hydroxide

GEN-AM4000

SECTION 01: PRODUCT INFORMATION AND COMPANY INFORMATION

MANUFACTURER: Same as above
PREPARED BY: Production Department
VERSION DATE: 27-Jan-14
TELEPHONE NO.: (519) 451-1614
EMERGENCY PHONE NO.: (800) 996-6666
CHEMICAL FAMILY: Not Available **CHEMICAL FORMULA:** Not Applicable
MOLECULAR WEIGHT: Not Applicable **MATERIAL USE:** Please Refer to technical literature
SYNONYMS:

SECTION 02: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	Conc. Approx. %	C.A.S. #	LD/50 (RTE/SPEC)	LC/50 (RTE/SPEC)	TLV
Ammonia	98-100	7664-41-7	N. Av.	2000 ppm/ 4 Hours (Inhalation/Rat)	N.Av.

SECTION 03: HAZARD IDENTIFICATION

ROUTE OF ENTRY

Eyes: Liquid, vapour, or mist causes irritation, experienced as stinging, excess blinking and tear production, with excess redness of the conjunctiva. Corrosive to eye tissue and may cause severe damage and blindness.

Skin: Corrosive. May cause redness and clistering of skin.

Inhalation: Causes severe respiratory irritation. Excessive inhalation causes headache, dizziness, nausea and incoordination. Material is irritating to musous membrane and upper respiratory tract. Expouser can cause coughing, chest pains and difficulty in breathing. Causes lung irritation.

Ingestion: Corrosive. Causes burns to the mouth, throat and stmoach. Ingestion may cause gastrointestinal irritation or ulceration.

SECTION 04: FIRSAID

Skin Contact: Flush skin with water. Wash contaminated clothing before reuse.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physcian.

Inhalation, Acute: Remove person to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to physician: N.Av.

SECTION 05: FIRE EXPLOSION HAZARD AND FIRE FIGHTING MEASURES

FLAMMABLE?	No	
IF YES, UNDER WHICH CONDITIONS?		
FLASH POINT (TCC) (C):	Not Available	
FLAMMABLE LIMITS:	LEL(% BY VOL.): 16	UEL(% BY VOL.): 27
AUTO IGNITION TEMPERATURE (C)	671 (F)	
EXTINGUISHING MEDIA	Use extinguishing media appropriate for surrounding fire. Use water spray to cool fire exposed surfaces.	
SPECIAL PROCEDURES:	Fire fighters should wear full protective clothing, including self-contained breathing equipment.	
HAZARDOUS COMBUSTION PRODUCTS:	Emit toxic fumes under fire conditions. During a fire, oxides of nitrogen may be produced. The vapours may explode at high temperatures if brought in contact with an ignition source.	
UNUSUAL FIRE AND EXPLOSION HAZARDS	Not Available	
SENSITIVITY TO STATIC DISCHARGE	Not Available	
SENSITIVITY TO MECHANICAL IMPACT:	Not Available	

SECTION 06: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedure: Wear impervious protective clothing. Dike area to prevent spreading. Isolate hazard area and restrict access. Neutralize with lime slurry, limestone, or soda ash. Use water fog to knock down vapours; contain runoff. Small spills: soak up with absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residue with absorbent material and wash with water.

SECTION 07: HANDLING AND STORAGE**Handling Procedures and Storage Requirements**

Avoid contact with skin, eyes and clothing. Avoid breathing vapour. Keep away from heat, sparks and flame. Handle and open containers with care.

Store in a cool, dry, well-ventilated area, away from heat and ignition sources. Keep away from direct sunlight. Place away from incompatible materials. Store below 27°C. Protect against physical damage.

SECTION 08: PERSONAL PROTECTIVE EQUIPMENT / EXPOSURE CONTROLS

GLOVES/TYPE:	Butyl Rubber.		
RESPIRATOR/TYPE:	If exposure exceeds occupational exposure limits, use an appropriate NIOSH-approved respirator. Use self-contained breathing apparatus in high vapour concentrations.		
EYE/TYPE:	Chemical goggles. Also wear a face shield if splash hazard exists.		
OTHER/TYPE:	Ensure that eyewash stations and safety showers are proximal to the work station location.		
ENGINEERING CONTROL	Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.		

SECTION 09: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE/APPEARANCE:	Clear, Liquid		
ODOUR:	Strong Pungent Ammonia odour	ODOUR THRESHOLD:	N. Av.
VAPOUR PRESSURE (mm Hg @ 20C):	10 psia	VAPOUR DENSITY (Air=1):	0.596
EVAPORATION RATE (Ether = 1):	<1	SPECIFIC GRAVITY:	0.9
BOILING POINT (C):	80.6	FREEZING POINT (C)	-106
Ph (% SOLUTION):	11.6 (1%)	% VOLATILE (WT):	100%
SOLUBILITY IN WATER (% W/W)	100%		

SECTION 10: STABILITY AND REACTIVITY

CHEMICALLY STABLE? Stable

IF NO, UNDER WHICH CONDITIONS?

INCOMPATIBILITY WITH OTHER SUBSTANCES Yes

IF YES, WITH WHICH ONES: Strong oxidizers. Strong acids. Halogens. Mineral acids. Contact with copper. Zinc. Tin. Aluminum and alloys. Acrolein.

SPECIAL REACTIVITY AND UNDER WHAT CONDITIONS Adding NaOH to this material and or heating will volatilize NH₃.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of Nitrogen

SECTION 11: TOXICOLOGICAL INFORMATION

EXPOSURE LIMIT OF MATERIAL See section 2
LC 50 OF MATERIAL, SPECIES AND ROUTE See section 2
LD 50 OF MATERIAL, SPECIES AND ROUTE See section 2
CARCINOGENICITY OF MATERIAL Not listed.
REPRODUCTIVE EFFECTS: Not available.
IRRITANCY OF MATERIAL Not available.
SENSITIZING CAPABILITY OF MATERIAL Not available.
SYNERGISTIC MATERIALS Not available.

SECTION 12: ECOLOGICAL INFORMATION

AQUATIC TOXICITY This material is expected to be toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Disposal of all waste must be done in accordance with municipal, provincial and federal regulations.

SECTION 14: TRANSPORT INFORMATION

TDG CLASSIFICATION Class 8, Ammonia Solution
UN NUMBER: 2672
PACKING GROUP: III
Special Provisions for Transport

SECTION 15: REGULATORY INFORMATION

WHMIS CLASSIFICATION D1B E
Toxic materials, Corrosive materials

SECTION 16: OTHER INFORMATION

ABBREVIATIONS USED: N.Av. = Not Available
N.App. / N.Ap. = Not Applicable

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SOURCES: Supplier MSDS

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