Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	FIRST STREET CLEAR AMMONIA CLEANER
Other name(s):	Aqua ammonia; Ammonium hydroxide solution; Ammonium hydrate; Aqua ammonia
Recommended use of the chemical and restrictions on use:	Textiles, manufacture of rayon, rubber, fertilizers, refrigeration, condensation polymerization, pharmaceuticals, ammonia soaps, lubricants, ink manufacture, explosives, ceramics, detergents, household cleaners.
Supplier: **Street Address:** **Telephone Number:** **Facsimile:**	Liquid Packaging Company 7739 Monroe Street, Paramount, CA 90723 (562) 633-3224 (562) 633-6784
Transportation Emergency Telephone:	INFOTRAC Emergency Response Hotline Contract No. 107505 (800) 535-5053 USA and Canada (352) 323-3500 International

2. HAZARDS IDENTIFICATION

OSHA Hazards: Toxic by ingestion, Corrosive

Target Organs: None

Signal Words: Danger

Pictograms:

Hazard Statement(s):
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.

Precautionary Statement(s):

Prevention:
P260 Do not breathe mist / vapours / spray.
P264 Wash hands thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.

Response:
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
P363 Wash contaminated clothing before re-use.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a **POISON CENTER** or doctor/physician.
P391 Collect spillage.

Storage:
P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.

Disposal:
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS Number	Proportion	Hazard Codes
Water	7732-18-5	65-90%	-
Ammonia, aqueous solution	1336-21-6	10-35%	H314 H335 H400

4. FIRST AID MEASURES

For advice, contact a Poison Control Center 1 (800) 222-1222 or call a doctor. IN CASE OF EMERGENCY DIAL 911.

Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:
If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:
If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes.

Ingestion:
Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:
Treat symptomatically. Can cause corneal burns. Following severe exposure, the patient should be kept under medical supervision for at least 48 hours.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media:
Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2R

Specific hazards arising from the substance or mixture:
Non-combustible material. May form flammable vapor mixtures with air. Avoid all ignition sources. Caution should be exercised when opening storage containers or vessels. Flammable concentrations of ammonia gas can accumulate in the head space.

Special protective equipment and precautions for firefighters:
Ammonia: The main products of combustion in air, at or above 780 °C, are nitrogen and water with small amounts of nitrogen dioxide and ammonium nitrate. Ammonia decomposes into flammable hydrogen gas at approximately 450 °C. May form flammable mixtures in air. The presence of oil or other combustible material will increase the fire hazard. Fatalities have occurred as a result of the explosive nature of the ammonia gas. If involved in a fire, keep containers cool with water spray. If safe to do so, remove containers from path of fire. Firefighters should wear full body protective clothing and self-contained breathing apparatus. Consider evacuation.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:
Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:
Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapors. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Neutralize with dilute acid. Collect and seal in properly labeled containers or drums for disposal.

7. HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

Precautions for safe handling:
Avoid skin and eye contact and breathing in vapor, mists and aerosols. Keep out of reach of children.

Conditions for safe storage, including any incompatibilities:
Store in cool place and out of direct sunlight. Store away from foodstuffs. Store away from sources of heat or ignition. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Ammonia	18 mg/m3 25 ppm	REL	NIOSH
	27 mg/m3 35 ppm	STEL	NIOSH
	35 mg/m3 50 ppm	PEL	OSHA

	17 mg/m3	TLV	ACGIH
	24 mg/m3	STEL	ACGIH

TWA: Time Weighted Average over 8 hours of work.
TLV: Threshold Limit Value over 8 hours of work.
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit during x minutes.
IDLH: Immediately Dangerous to Life or Health
WEEL: Workplace Environmental Exposure Levels
CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear nitrile or rubber gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Not Available

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Colorless to Cloudy
Odor:	Sharp, pungent, Irritating
Odor Threshold:	0.6-53 ppm (detection); 0.7-55 ppm (recognition).
Solubility:	Miscible in water.
Specific Gravity:	Not Available
Relative Vapor Density (air=1):	0.6
Vapor Pressure (20 °C):	6.9-10.5 psi
Flash Point (°C):	Not applicable
Flammability Limits (%):	16-25
Autoignition Temperature (°C):	Not applicable
% Volatile by Volume:	2 - 35
Boiling Point/Range (°C):	Not Determined
pH:	11.7 (1% aqueous solution)

10. STABILITY AND REACTIVITY

Reactivity:	Reacts violently with acids.
Chemical stability:	May form explosive compounds with mercury, halogens, and hypochlorites. Reacts exothermically with strong mineral acids.
Possibility of hazardous reactions:	Corrosive to copper, nickel, tin, zinc, and their alloys.
Conditions to avoid:	Avoid exposure to heat. Avoid exposure to light.

Incompatible materials:	Incompatible with peroxides, metal salts, acids, and reducing agents.
Hazardous decomposition products:	Hydrogen.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Eye contact:	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.
Skin contact:	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
Inhalation:	Breathing in mists or aerosols will produce respiratory irritation. Inhalation of high concentrations may result in shortness of breath, chest pain, severe headache and lung damage including pulmonary oedema. Effects may be delayed.
Acute toxicity:	Oral LD50 (rat): 350 mg/kg (1)
Chronic effects:	Chronic exposure to ammonia may cause chemical pneumonitis and kidney damage.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic toxicity:	Avoid contaminating waterways. Very toxic to aquatic life. LC50 – Rainbow trout – 0.1 ppm – 24 hours LC50 – Fathead minnow – 8.2 mg/l – 96 hours LC50 – Bluegill – 0.1 ppm – 48 hours

13. DISPOSAL CONSIDERATIONS

Waste Residues	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste products or residues.
Product Containers	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

The following U.S. Department of Transportation (DOT), Transport Canada (TC), and International Maritime Organization (IMO) and United Nations (UN) recommendations pertain to ammonia solutions containing not less than 10% but not more than 35% ammonia.

DOT/TC/IMO/UN Proper Shipping Name(s):	AMMONIA SOLUTION
Hazard Class:	8
DOT/IMO/UN Identification Number:	2672
Packing Group:	III
DOT/IMO Label(s) Required:	CORROSIVE
DOT/TC/IMO/UN Classification:	Corrosive; Environmentally dangerous substance. Classified as Dangerous Goods by transport by sea; DANGEROUS GOODS.
Air Transport	Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

15. REGULATORY INFORMATION

Classification:
This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.
Classification of the substance or mixture:
Skin Corrosion - Sub-category 1C
Specific target organ toxicity (single exposure) - Category 3 Acute Aquatic Toxicity - Category 1

Hazard Statement(s):
H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation.
H400 Very toxic to aquatic life.

Poisons Schedule (SUSMP): S6 Poison.

16. OTHER IMFORMATION

Liquid Packaging Company believes the information contained herein is accurate; however, Liquid Packaging Company makes no guarantees or warranties with respect to such accuracy and assumes no liability in connection with the use of the information contained herein by any party. The provision of the information contained herein by Liquid Packaging Company is not intended to be and should not be construed as legal advice or as ensuring compliance by other parties. Judgments as to the suitability of the information contained herein for the party's own use or purposes are solely the responsibility of that party. Any party handling, transferring, transporting, storing, applying or otherwise using this product should review thoroughly all applicable laws, rules, regulations, standards and good engineering practices. Such thorough review should occur before the party handles, transfers, transports, stores, applies or otherwise uses this product.