Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910, 1200, Standard must be consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-mandatory Form)
Form Approved

Ammonia Inhalant

Section 1 – Hazardous Ingredients

			OSHA		ACGIH	
Component	CAS #	%	PEL/TWA	PEL/STEL	TLV/TWA	TLV/STEL
Ammonia	**7664-41-7**	**17.5**	**Not listed**	**35 ppm**	**25 ppm**	**35 ppm**
Ethyl Alcohol	**64-17-5**	**37.5**	**1000 ppm**	**Not listed**	**1000 ppm**	**Not listed**

Section 2 – Physical Data

Boiling Point	**N/A**	Melting Point	**N/A**	Specific Gravity	**0.891 25/25**	Vapor Pressure	**N/A**
Vapor Density	**N/A**	Solubility	**Very soluble**	% Volatiles	**55%**	Evaporation	**N/A**
Appearance and Odor		**Clear, pink to light red liquid. Pungent odor of ammonia.**				pH	**N/A**

Section 3 – Fire and Explosion Information

Flash Point	**Less than 50° F**	Autoignition Temp	**Ammonia 1204° F / Alcohol 685° F**
Flammable Limits	**Unknown**	Extinguishing Media	**Alcohol resistant foam, CO2 or dry chemical**

Special Fire Fighting Procedures	Note: Individuals should perform only those fire-fighting procedures for which they have been trained. Remove all sources of ignition. Move exposed containers from fire area if it can be done without risk. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode. Spray extinguishing media directly into base of flames. Water may be used to keep fire-exposed containers cool.
Unusual Fire and Explosion Hazard	When heated, mixture will give off ammonia gas, a strong irritant to eyes, respiratory tract, and mucous membranes. Other toxic gases produced are oxides of nitrogen, carbon monoxide, carbon dioxide and hydrogen. Closed containers exposed to heat may develop pressure and explode. Alcohol vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Alcohol burn with a pale blue flame, which may be extremely hard to see under normal lighting conditions. Personnel may be able to feel the heat of the fire without seeing flames. Extreme caution may be exercised in fighting alcohol fires.

Section 4 – Health Hazard Information

Primary Routes of Exposure	Inhalation	Irritation or burns of the respiratory system, headache, coughing, lung congestion or inflammation, pulmonary edema, breathing difficulty. Headache, dizziness, drowsiness, loss of appetite and an inability to concentrate.
	Eye	Sever irritation or burns, may lead to blindness
	Skin	Local irritation, dry skin, burns
	Ingestion	Burning pain in mouth, throat, construction of throat, coughing, followed by nausea, vomiting, or diarrhea. Ingestion may prove fatal.
Medical Conditions Aggravated by Exposure		Individuals with pre-existing nervous system disorders, skin disorders, eye problems, or impaired respiratory function may be more susceptible to the effects of overexposure.

Section 5 – Emergency and First Aid Procedures

Inhalation	Remove subject immediately to fresh air. Give artificial respiration if victim is not breathing. If breathing is difficult, give oxygen. Get immediate medical attention.
Eye Contact	Immediately flush eyes with copious amounts of water for at least 15 minutes. Eyelids should be held apart and away from eyeball for thorough rinsing. Do not permit victim to rub eyes. Get immediate medical attention.
Skin Contact	Immediately flush skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Do not rub or apply ointment to affected area. Obtain medical attention if irritation persists. Wash clothing before re-use.
Ingestion	Contact a Poison Control Center immediately. DO NOT INDUCE VOMITING. If conscious, have victim swallow large amounts of water. Do not give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.

Section 6 – Personal Protection

Storage Requirements	Protect containers from physical damage. Detached or outside storage is preferred. Inside storage should be an NFPA approved flammable liquid storage room or cabinet. Store in corrosion-proof area at temperatures below 77° F. Do not store in direct sunlight. Isolate from incompatible materials. Keep containers tightly closed.
Handling Requirements	All ignition sources should be eliminated. Remove closure carefully; internal pressure may be present. Keep closure up to prevent leakage. When contents are being transferred, metallic containers must be bonded to the receiving container and grounded to avoid static discharges. Never use pressure to empty containers. Replace closure carefully after each opening.
Ventilation	Not required for product use. When handling bulk material, use general or local exhaust ventilation to meet TLV requirements. When engineering controls are not feasible or sufficient to achieve full conformance with acceptable exposure limits, use NIOSH approved respiratory protection equipment. Care must be taken to assure that any respirator chosen is capable of protecting the user from **both ammonia and ethyl alcohol vapors.** In some cases, a self-contained breathing apparatus may be advisable.
Eye Protection	Not required for product use. When handling bulk material, always wear gas-tight, splash-proof chemical safety goggles meeting OSHA 29CFR 1910.133 specifications.
Skin Protection	Not required for product use. Use rubber gloves, protective suit, face shield and overshoes when handling bulk product.

Section 7 – Hazardous Reactivity

Stable at room temperature. Hazardous polymerization will not occur. However, product will react exothermically with acids. Releases ammonia vapor when heated. Ammonia component will decompose to hydrogen and oxides of nitrogen when heated. Carbon monoxide gas may also be produced when heated.	
Conditions to Avoid	Sunlight, heat (heating above ambient temperatures causes the vapor pressure of the solution to increase.) Avoid mixing with acids, most common metals, strong oxidizing agents, brass, zinc, chlorine, aluminum, copper, bronze, mercury, dimethyl sulfate and acetyl chloride.

Section 8 – Spill, Leak and Disposal Procedures

For large spills, stop leak if you can do so without risk. Extinguish all sources of ignition. Wear self-contained breathing apparatus, chemical safety goggles and full protective clothing. Ventilate area. Spilled liquids should be contained and not washed into sewers or ground water. Contain by diking with non-combustible absorbent materials and place residue in DOT approved waste container. Comply with all applicable local, state and federal regulations on spill reporting, handling and disposal of waste.	
Other Precautions	Containers, even those that have been emptied, will retain product residue and vapors. Handle empty containers as if they were full.