



MATERIAL SAFETY DATA SHEET

SECTION 1 -- CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME | ARRAY AMMONIA

PRODUCT CODE | 270784

EMERGENCY TELEPHONE NUMBERS

ISSUE DATE | March 19, 2003

MANUFACTURER | James Austin Co
STREET ADDRESS | 115 Downieville Rd
CITY, STATE, ZIP | Mars, PA 16046

Transportation: | 1-800-424-9300 *

* For spill, leak, fire or transport accident emergencies.

Product Information: 1-724-625-1535

SECTION 2 -- COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENT	CAS No.	% by wt.	EXPOSURE LIMITS		
			OSHA PEL	ACGIH TLV	NIOSH REL
Ammonium hydroxide	1336-21-6	2.5 – 4.0	35 ppm STEL (as Ammonia)	25 ppm TWA 35 ppm STEL	25 ppm TWA 35 ppm STEL

SECTION 3 -- HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	Can cause chemical burns. Harmful or fatal if swallowed. Eye contact may cause severe irritation. Vapors are extremely irritating to respiratory tract. NEVER MIX WITH CHLORINE BLEACH OR OTHER CHLORINATED CHEMICALS. TO DO SO WILL RELEASE TOXIC GASES THAT CAN BE FATAL.
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POTENTIAL HEALTH EFFECTS	
INGESTION	Can cause severe damage to mouth, throat and stomach, leading to abdominal pain, nausea, vomiting, collapse and possible death.
INHALATION	Damages airways and lungs. Effects include pulmonary edema, bronchitis, chemical pneumonitis and chronic respiratory disease.
EYE CONTACT	Severely irritating to the eyes. May cause permanent corneal damage, including perforation, ulceration and blindness.
SKIN CONTACT	Can cause severe skin burns with possible blistering and tissue destruction.

SECTION 4 -- FIRST AID MEASURES

INGESTION	If swallowed, DO NOT induce vomiting. Immediately drink a large quantity of water. Follow with citrus juice if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
INHALATION	If exposed to excessive levels of vapors, remove to fresh air and give artificial respiration if not breathing. The most dangerous consequence of exposure to high levels of ammonia is pulmonary edema; for severe contact, Get immediate medical attention.
EYE CONTACT	Immediately flush eye with plenty of cool, running water. Remove contact lenses if applicable, and continue flushing for at least 15 minutes, holding eyelids apart to ensure thorough rinsing of the entire eye. Speed is essential to minimize injury. Call a physician immediately.
SKIN CONTACT	Immediately flush skin with plenty of cool running water for at least 15 minutes. Wash with soap and water. If irritation develops or persists, get medical attention. Remove contaminated clothing and shoes; wash before reuse.
NOTE TO PHYSICIAN	Information pertaining to ingestion toxicology, therapy, symptomatology and treatment can be found in <i>Clinical Toxicology of Commercial Products</i> , authored by Gosselin, Smith and Hodge and published by Williams & Wilkins, Baltimore, Maryland. See listing for Ammonia in Therapeutics Index, Section III.

SECTION 5 -- FIRE FIGHTING MEASURES

FLASH POINT / METHOD	None / N.A.	FLAMMABLE LIMITS	Lower:16%; Upper:25% Decomposes at 928 F.
EXTINGUISHING MEDIA	If involved in a fire, use carbon dioxide, dry chemical or water spray.		
SPECIAL FIRE FIGHTING PROCEDURES	Fire fighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Use water spray to keep fire-exposed containers cool. Use water fog or spray to remove generated ammonia gas from the atmosphere.		
FIRE AND EXPLOSION HAZARDS	Ammonia gas will be liberated at all temperatures, which can be explosive under confined space conditions. Contact between this product and concentrated mineral acids will cause instant boiling and a possible explosion.		

SECTION 6 -- ACCIDENTAL RELEASE MEASURES

RESPONSE TO SPILLS	Small spills: Mop up residue and rinse area thoroughly with water. Large spills: Dike or dam spill. Pump to containers or soak up on inert absorbent. Use personal protective equipment and stay upwind of spill.
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SECTION 7 -- HANDLING AND STORAGE

HANDLING PRECAUTIONS	Product is a strongly alkaline material; handle with care, as for all strong chemicals. Keep container tightly closed when not in use. Handle empty containers as if full, due to presence of residual ammonia vapors. Wash thoroughly after handling. NEVER MIX WITH CHLORINE BLEACH OR OTHER CHLORINATED CHEMICALS. TO DO SO WILL RELEASE TOXIC GASES THAT CAN BE FATAL.
STORAGE PRECAUTIONS	Store in a cool, dry, well-ventilated place. Keep away from bleach and acidic materials. Keep from freezing.

SECTION 8 -- EXPOSURE CONTROLS / PERSONAL PROTECTION

HYGIENIC PRACTICES	Observe label precautions; use personal protective equipment. Avoid breathing vapors of this product.
ENGINEERING CONTROLS	Local exhaust ventilation may be required to keep vapors within exposure limits. Facilities using this product must be equipped with an eyewash station.

PERSONAL PROTECTIVE EQUIPMENT

X	RESPIRATOR	Use NIOSH approved respirator if exposure exceeds PEL or TLV limits.
X	GOGGLES / FACE SHIELD	Chemical splash goggles required; also use face shield if exposure is severe
X	APRON	Recommended; PVC, Neoprene or Vinyl acceptable
X	GLOVES	Recommended; use impervious PVC or Neoprene with long gauntlet
X	BOOTS	Recommended to protect shoes and feet when using product for floor cleaning

SECTION 9 -- PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear colorless liquid	BOILING POINT	~ 212 deg F
ODOR	Pungent ammonia	FREEZING POINT	32 deg F
pH	11.5 (100% concentrate)	VAPOR PRESSURE	Not established
SPECIFIC GRAVITY	0.980	VAPOR DENSITY	Not established
SOLUBILITY IN WATER	Complete	EVAPORATION RATE	Not determined

SECTION 10 -- STABILITY AND REACTIVITY

CHEMICAL STABILITY		STABLE	X		UNSTABLE	
CONDITIONS TO AVOID	NEVER MIX with hot water or chlorine bleach. Avoid contact with acids or alkalis, oxidizing materials, copper, aluminum, zinc and galvanized metals.					
INCOMPATIBILITY	Contact with strong acids produces exothermic, possibly violent reaction. Contact with strong alkalis promotes the evolution of ammonia gas.					
HAZARDOUS PRODUCTS OF DECOMPOSITION	Ammonia gas and oxides of nitrogen. Chloramines -- from contact with hypochlorite bleach.					
POLYMERIZATION		WILL NOT OCCUR	X		MAY OCCUR	
CONDITIONS TO AVOID	Not applicable					

SECTION 11 -- TOXICOLOGICAL INFORMATION**CARCINOGENICITY**

	THIS PRODUCT CONTAINS A KNOWN OR SUSPECTED CARCINOGEN
X	THIS PRODUCT DOES NOT CONTAIN ANY KNOWN OR ANTICIPATED CARCINOGENS ACCORDING TO THE CRITERIA OF THE NTP ANNUAL REPORT ON CARCINOGENS AND OSHA 29 CFR 1910, Z

OTHER EFFECTS

ACUTE	Strongly irritating to all tissues on exposure.
CHRONIC	Not determined

SECTION 12 -- ECOLOGICAL INFORMATION

BIODEGRADABILITY		CONSIDERED BIODEGRADABLE	X		NOT BIODEGRADABLE	
BOD / COD VALUE	Not established					
ECOTOXICITY	No data available					

SECTION 13 -- DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD	Small amounts of unused product may be flushed safely to the sanitary sewer with plenty of water. Contact local water board before flushing large amounts. If solidified, large amounts may be disposed of in a sanitary landfill. Contact state or local authorities for additional restrictions.					
RCRA CLASSIFICATION	Non-hazardous					
RECYCLE CONTAINER		YES	X		CODE	2 - HDPE
						NO

SECTION 14 -- TRANSPORT INFORMATION

DOT CLASSIFICATION		HAZARDOUS			NOT HAZARDOUS	X
DESCRIPTION	Not applicable					
HM CODE	None					

SECTION 15 -- REGULATORY INFORMATION

REGULATORY STATUS

	EPA REGISTERED (UNDER FIFRA)	
	FDA REGULATED	
	KOSHER	
X	SARA TITLE III MATERIAL	Section 304
	USDA AUTHORIZED	

SECTION 16 -- OTHER INFORMATION

NFPA CLASSIFICATION

1	BLUE	HEALTH HAZARD
0	RED	FLAMMABILITY
0	YELLOW	REACTIVITY
--	WHITE	SPECIAL HAZARD

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by James Austin Company in connection with the use of this information.