

MALLINCKRODT INC. SCIENCE PRODUCTS DIVISION -- AMMONIUM HYDROXIDE --  
6810-00-753-4784

===== Product Identification =====

Product ID:AMMONIUM HYDROXIDE

MSDS Date:04/06/1989

FSC:6810

NIIN:00-753-4784

MSDS Number: BJXNP

=== Responsible Party ===

Company Name:MALLINCKRODT INC. SCIENCE PRODUCTS DIVISION

Address:PARIS BYPASS

Box:M

City:PARIS

State:KY

ZIP:40361

Country:US

Info Phone Num:800-354-2050(PRE

SS 3)/314-982-5000

Emergency Phone Num:800-354-2050/314-539-1600

CAGE:62910

=== Contractor Identification ===

Company Name:BAXTER HEALTHCARE CORP/PHARMASEAL DIVISION

Address:808 HIGHWAY 24 WEST

Box:City:MOBERLY

State:MO

ZIP:65270

Country:US

CAGE:19484

Company Name:MALLINCKRODT SPECIALTY CHEMICALS CO

Address:222 RED SCHOOL LANE

Box:City:PHILLIPSBURG

State:NJ

ZIP:08865

Country:US

Phone:908-859-2151

CAGE:62910

===== Composition/Information on Ingredients =====

Ingred Name:AMMON

IUM HYDROXIDE (SARA III)

CAS:1336-21-6

RTECS #:BQ9625000

Fraction by Wt: 100%

Other REC Limits:TRANS PEL:50 PPM

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:VENT:GENERALLY PREFERRED BECAUSE IT CAN CONTROL EMISSIONS  
OF CONTAMINANT AT SOURCE, PVNTG DISPERSION INTO WORK AREA.

RTECS #:9999999ZZ

===== Hazards Identification =====

LD50 LC50 Mixture:LD50:ORAL RAT 350 MG/KG

Routes of Entry: Inhalation:YES Skin:NO Ingestion:NO

Reports of Carcinogenicity

:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute and Chronic:INHAL:MAY CAUSE IRRIT TO RESP TRACT,  
SYMPS MAY INCLUDE COUGHING, SORE THROAT & LABORED BRTHG. HIGH CONCS  
MAY CAUSE LARYNGITIS, TRACHEITIS, PULMONARY EDEMA, CHEST PAINS, OR  
PNEUMONITIS. INGEST:TOXIC! M AY CAUSE CORR TO ESOPHAGUS & STOM  
W/PERFORATION & PERITONITIS. SYMPS MAY INCLUDE PAIN IN MOUTH, (SEE  
EFTS OF OVEREXP)

Explanation of Carcinogenicity:NOT RELEVANT

Effects of Overexposure:HLTH HAZ:CHEST & ABDOMEN W/COUGHING,  
VOMITING &

COLLAPSE. SKIN:MAY CAUSE BURNS W/VESICATION. EYE:VAPS MAY CAUSE  
IRRIT. SPLASHES MAY CAUSE SEVERE PAIN & EYE INJURIES SUCH AS  
GLAUCOMA, CORNEAL SCARS, IR IS ATROPHY & CATARACTS.

Medical Cond Aggravated by Exposure:PERSONS W/PRE-EXISTING EYE  
DISORDERS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE  
TO EFFECTS OF MATERIAL.

===== First Aid Measures =====

First Aid:INHAL:REMOVE TO FRESH AIR. IF NOT BRTHG, GIVE ARTF RE  
SP. IF

BRTHG DFCLT, GIVE OXYGEN. CALL MD. INGEST:GIVE SEVERAL GLASSES OF  
WATER TO DRINK TO DILUTE. VOMIT MAY OCCUR SPONTANEOUSLY, BUT DO NOT  
INDUCE . GET MD. SKIN:IMMED FLUSH W/PLENTY OF WATER FOR AT LEAST 15  
MINS WHILE REMOVING CONTAM CLTHG & SHOES. CALL MD. EYE:WASH  
W/PLENTY OF WATER FOR AT LEAST 15 MINS, LIFTING LOWER/UPPER LIDS.  
GET MD IMMED.

===== Fire Fighting Measures =====

Lower Limits:16 (NH\*3)

Upper Limits:27 (NH\*3)

Extinguish

ing Media:WATER SPRAY TO BLANKET FIRE, COOL FIRE EXPOSED  
CNTNRS & TO FLUSH NON-IGNITED SPILLS OR VAPORS AWAY FROM FIRE.  
Fire Fighting Procedures:WEAR NIOSH/MSHA APPROVED SCBA W/FULL FACEPIECE  
OPERATED IN PRESSURE DEMAND OR OTHER POSITIVE PRESSURE MODE AND  
FULL PROTECTIVE EQUIPMENT.  
Unusual Fire/Explosion Hazard:NOT CONSIDERED TO BE AN EXPLOSION HAZARD.

===== Accidental Release Measures =====

Spill Release Procedures:VENT/EVACUATE AREA. CLEAN-UP PERSONNEL  
REQUIRE  
PROT CLTHG & RESP PROT FROM VAPS. ALLOW ONLY QUALIFIED PERSONNEL TO  
HANDLE SPILL. CONTAIN/RECOVER LIQ WHEN POSS. SPILLS MAY BE  
NEUTRALIZED W/DILUTE HYDR OCHLORIC ACID OR DILUTE SULFURIC (SEE  
SUPP DATA)  
Neutralizing Agent:DILUTE HYDROCHLORIC ACID OR DILUTE SULFURIC ACID.

===== Handling and Storage =====

Handling and Storage Precautions:KEEP IN TIGHTLY CLOSED CNTNR, STORED  
IN COOL, DRY, VENT AREA. PROTECT AGAINST PHYSICAL DMG. SEPA  
RATE  
FROM INCOMPATIBLES. PROTECT FROM DIRECT SUNLIGHT.  
Other Precautions:WARNING! HARMFUL IF SWALLOWED/INHALED. CAUSES BURNS.  
DO NOT GET IN EYES, ON SKIN/CLTHG. AVOID BRTHG VAP. KEEP CNTNR  
CLOSED. USE W/ADEQ VENT. WASH THORO AFTER HANDLING. SUBSTANCE  
CLASSIFIED AS POISON U NDER FEDERAL CAUSTIC POISON ACT.

===== Exposure Controls/Personal Protection =====

Respiratory Protection:USE NIOSH/MSHA APPROVED DUST/MIST RESPIRATOR  
W/CHEMICAL GOGGLES IN GENERAL UP TO  
TEN TIMES THE TLV. CONSULT  
RESPIRATOR SUPPLIER FOR LIMITATIONS. ALTERNATIVELY, NIOSH/MSHA  
APPRVD SUPPLIED AIR FULL FACE PIECE RESP OR AIRLINED HOOD MAY BE  
WORN.  
Ventilation:LOCAL/GENERAL EXHAUST RECOMMENDED TO KEEP EXPOS BELOW  
AIRBORNE EXPOS LIMITS. LOCAL EXHST VENT IS (SEE INGRED 2)  
Protective Gloves:IMPERVIOUS GLOVES.  
Eye Protection:CHEM WORKERS GOGGLES,FACESHLD OPT  
Other Protective Equipment:IMPERVIOUS PROTECTIVE CLOTHING, INCLUDING  
BOOTS, LAB COAT, APRON OR COVERALLS. E

YEWASH FOUNTAIN/QUICK DRENCH FACILITY.

Work Hygienic Practices:CONTACT LENSES SHOULD NOT BE WORN WHEN WORKING W/THIS MATERIAL. WASH THOROUGHLY AFTER HANDLING.

Supplemental Safety and Health

MATLS TO AVOID:SILVER PERMANGANATE, OLEUM, BETA-PROPIOLACTONE. SPILL PROC:ACID & DISCHARGED TO SEWER W/ LARGE AMTS OF WATER. REGS FOR PH, AMMONIA CONTENT & SALTS FOR EFFLUENTS MUST BE CONSIDERED. DO NOT FLUSH DIRECTLY TO SEWERS. ALTERNATIVELY, SPILLS MAY BE ABSORBED W/DRY INERT MATL & COLLECTED FOR DISPOSAL.RQ:1000 LBS

===== Physical/Chemical Properties =====

HCC:C2

Boiling Pt:B.P. Text:97.0F,36.1C

Melt/Freeze Pt:M.P/F.P Text:-98F,-72C

Vapor Pres:115 @ 20C

Vapor Density:1.2

Spec Gravity:0.9

Solubility in Water:INFINITE

Appearance and Odor:CLEAR, COLORLESS SOLUTION, AMMONIA ODOR

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:YES

ACIDS, ACROLEIN, DIMETHYL SULFATE, HALOGENS, SILVER NITRATE, PROPYLENE

OXIDE,NITROMETHANE,SILVER OXIDES (SEE SUPP DATA)

Stability Condition to Avoid:NONE SPECIFIED BY MANUFACTURER.

Hazardous Decomposition Products:EMITS TOXIC FUMES OF AMMONIA AND NITRIC OXIDES WHEN HEATED TO DECOMPOSITION.

===== Disposal Considerations =====

Waste Disposal Methods:DISPOSE I/A/W FEDERAL, STATE AND LOCAL REGULATIONS.

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