

VAN WATERS AND ROGERS -- AMMONIUM HYDROXIDE -- 6810-00-243-4436

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

Product ID:AMMONIUM HYDROXIDE

MSDS Date:09/01/1993

FSC:6810

NIIN:00-243-4436

MSDS Number: BHJZZ

=== Responsible Party ===

Company Name:VAN WATERS AND ROGERS

Address:2256 JUNCTION AVE

City:SAN JOSE

State:CA

ZIP:95131

Country:US

Info Phone Num:408-435-8700

Emergency Phone Num:408-435-8700/800-424-930

0(CHEMTREC)

CAGE:0AN91

=== Contractor Identification ===

Company Name:CHEMICAL COMMODITIES AGENCY, INC.

Address:27447 PACIFIC STREET

Box:City:HIGHLAND

State:CA

ZIP:92346-2640

Country:US

Phone:909-864-2310

CAGE:60777

Company Name:VAN WATERS AND ROGERS

Address:2256 JUNCTION AVE

City:SAN JOSE

State:CA

ZIP:95131

Country:US

Phone:408-435-8700/800-424-9300(CHEMTREC)

CAGE:0AN91

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

Ingred Name:AMMONIA (SARA III)

CAS:7664-41-7

RTECS #:B

O0875000  
Fraction by Wt: 28-30%  
Other REC Limits:NONE RECOMMENDED  
OSHA PEL:35 PPM STEL  
ACGIH TLV:25 PPM/35 STEL; 9293  
EPA Rpt Qty:100 LBS  
DOT Rpt Qty:100 LBS

Ingred Name:WATER  
CAS:7732-18-5  
RTECS #:ZC0110000  
Fraction by Wt: BALANCE  
Other REC Limits:NONE RECOMMENDED

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

LD50 LC50 Mixture:LD50 (ORAL RAT) IS 350 MG/KG  
Routes of Entry: Inhalation:YES Skin:YES Ingestion:YES  
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO  
Health Hazards Acute and Chronic:ACUTE: EXTREME IRRITATION AND  
DESTRUCTION OF TISSUE ON EXPOSED PARTS OF THE BODY. MAY CAUSE  
PERMANENT EYE INJURY AND BLINDNESS. EXTENSIVE SKIN BURNS MAY CAUSE  
DEATH. SEVERE COUGHING, BRONCHIAL SPASMS AND DEATH CAN OCCUR.  
INGESTION OF A TEASPOONFUL CAN CAUSE DEATH. CHRONIC: NONE REPORTED.  
Effects of Overexposure:EYES: SEVERE IRRITATION, BLINDNESS. SKIN:  
SEVERE IRRITATION, POSSIBLE CHEMICAL BURNS AND POSSIBLE TISSUE  
DAMAGE. MAY BE FATAL. INHALATION: SEVERE IRRITATION OF NOSE AND  
THROAT, SEVERE COUGHING AND BRONCHIAL SPASMS. MAY BE FATAL.  
INGESTION:SEVERE GASTROINTESTINAL IRRITATION. MAY BE FATAL.  
Medical Condition Aggravated by Exposure:PERSONS WITH PRE-EXISTING EYE OR  
PULMONARY DISEASE.

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

First Aid:EYES: FLUSH WITH LARGE AMOUNTS OF WATER FOR 30 MINUTES. SEE  
DOCTOR. SKIN: REMOVE CONTAMINATED CLOTHING AND SHOES. FLUSH WITH  
LARGE AMOUNTS OF WATER FOR 30  
MINUTES. SEEK IMMEDIATE MEDICAL  
ATTENTION. INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE  
CPR. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEE DOCTOR. INGESTION:  
DO NOT INDUCE VOMITING. DILUTE WITH WATER. SEE DOCTOR IMMEDIATELY.

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

Flash Point:NONE  
Lower Limits:16  
Upper Limits:25  
Extinguishing Media:USE WATER SPRAY, CARBON DIOXIDE, OR DRY CHEMICAL.  
Fire Fighting Procedures:EVACUATE PERSONNEL. WEAR FIRE FIGHTING

PROTECTIVE EQUIPMENT AND A FULL FACED SCBA. COOL FIRE EXPOSED  
CONTAINERS WITH WATER SPRAY FROM A FAR DISTANCE.

Unusual Fire/Explosion Hazard:FLAMMABLE AMMONIA GAS WILL BE LIBERATED  
AND CAN BE EXPLOSIVE UNDER SOME CONDITIONS. THIS PRODUCT ADDED TO  
MINERAL ACIDS WILL CAUSE INSTANT BOILING AND EXPLOSION

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

Spill Release Procedures:WEAR PROTECTIVE CLOTHING, RESPIRATOR, SAFETY  
GLASSES, RUBBER GLOVES AND BOOTS. MOP  
OR WIPE UP AND PLACE INTO DOT  
APPROVED DISPOSAL CONTAINER.

Neutralizing Agent:DILUTE HYDROCHLORIC ACID FOR LARGE SPILLS.

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

Handling and Storage Precautions:STORE IN COOL, WELL VENTILATED AREA,  
AWAY FROM ALL SOURCES OF IGNITION AND INCOMPATIBLE MATERIALS. KEEP  
CONTAINERS TIGHTLY CLOSED.

Other Precautions:ZINC, COPPER, AND COPPER BASED ALLOYS SUCH AS BRASS  
ARE RAPIDLY CORRODED BY MOIST AMMONIA. AVOID USE OF THESE  
METALS IN  
AMMONIA SERVICE. USE ALL STEEL STORAGE AND HANDLING EQUIPMENT. VENT  
CONTAINER FREQUENTLY, MORE OFTEN IN WARM WEATHER.

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

Respiratory Protection:NIOSH AND US BUREAU OF MINES APPROVED  
RESPIRATORS FOR AMMONIA. NIOSH APPROVED SELF-CONTAINED BREATHING  
APPARATUS MUST BE USED WHEN EXPOSURE LIMITS ARE EXCEEDED.

Ventilation:LOCAL EXHAUST PREFERABLE. INSURE WORK AREA DOES NOT EXCEED  
25 PPM.

Protective Gloves:  
RUBBER OR NEOPRENE.

Eye Protection:CHEMICAL SPLASH GOGGLES.

Other Protective Equipment:RUBBER BOOTS AND APRON. EYE WASH STATION AND  
SAFETY SHOWER.

Work Hygienic Practices:WASH THOROUGHLY AFTER HANDLING AND BEFORE  
SMOKING OR EATING.LAUNDER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

PIPELINES MUST BE THOROUGHLY FLUSHED OF AMMONIA BEFORE WELDING OR  
CUTTING TO AVOID POSSIBLE IGNITION OF TRAPPED AMMONIA VAPORS. DO  
NOT GRIND, WELD, OR DRILL ON OR NEAR THIS CONTAINER

INNER. EMPTY

CONTAINERS RETAIN RESIDUE AND VAPORS. TREAT AS IF THEY WERE FULL.  
DO NOT PRESSURIZED TO EMPTY CONTAINERS.

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

HCC:B1

Boiling Pt:B.P. Text:82-105F

Melt/Freeze Pt:M.P/F.P Text:-97F,-72C

Vapor Pres:560

Vapor Density:0.60

Spec Gravity:0.90-0.913

pH:11-13

Evaporation Rate & Reference:1 (BUTYL ACETATE = 1)

Solubility in Water:COMPLETE

Appearance and Odor:COLORLESS LIQUID WITH PUNGENT IRRITATING ODOR.

Percent Volatiles

by Volume:28-30

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

Stability Indicator/Materials to Avoid:YES

ACIDS, OXIDIZERS, COPPER, ALUMINUM, ZINC, GALVANIZED METALS, GOLD,  
SILVER, ALLOYS OF THESE METALS.

Stability Condition to Avoid:LIQUID WILL NOT BURN, BUT VAPORS MAY  
IGNITE. AVOID EXPOSURE OF VAPORS TO IGNITION SOURCES.

Hazardous Decomposition Products:AMMONIA GAS AND OXIDES OF NITROGEN.

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

Waste Disposal Methods:CONTACT YOUR LOCAL ENVIRONMENTAL OFFICER.

DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND  
LOCAL REGULATIONS.

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