

VAN WATERS AND ROGERS INC -- AMMONIUM HYDROXIDE 28-30 % SOLUTION (VARIOUS GRADE)
-- 6810-00-222-9643

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

Product ID:AMMONIUM HYDROXIDE 28-30 % SOLUTION (VARIOUS GRADE)

MSDS Date:07/01/1989

FSC:6810

NIIN:00-222-9643

MSDS Number: BZQVV

=== Responsible Party ===

Company Name:VAN WATERS AND ROGERS INC

Address:6100 CARILLON POINT

City:KIRKLAND

State:WA

ZIP:98033

Country:

US

Info Phone Num:206-889-3400

Emergency Phone Num:206-889-3400/800-424-9300(CHEMTREC)

CAGE:0STM5

=== 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:VOPAK USA INC

Address:6100 CARILLON POINT

Box:City:KIRKLAND

State:WA

ZIP:98033-7357

Country:US

Phone:425-889-3400/425-889-3617

CAGE:0STM5

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

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Ingred Name:AMMONIA (SARA 302/313) (CERCLA)
CAS:7664-41-7
RTECS #:BO0875000
Fraction by Wt: 28 - 30%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:50 PPM
ACGIH TLV:25 PPM/35 STEL; 9495
EPA Rpt Qty:100 LBS
DOT Rpt Qty:100 LBS

Ingred Name:WATER
CAS:7732-18-5
RTECS #:ZC0110000
Fraction by Wt: 70 - 72%
Other REC Limits:NONE RECOMMENDED
OSHA PEL:NOT RELEVANT
ACGIH TLV:NOT RELEVANT

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

LD50 LC50 Mixture:LD50 (ORAL RAT) IS 35
0 MG/KG. (RTECS)
Routes of Entry: Inhalation:YES Skin:NO Ingestion:YES
Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO
Health Hazards Acute and Chronic:TARGET ORGANS:EYES, SKIN, RESPIRATORY
& GI TRACTS. ACUTE- CORROSIVE. VAPORS ARE SEVERLY IRRITATING TO
EYES, THROAT & RESPIRATORY TRACT. MAY CAUSE PULMONARY EDEMA &
DEATH. MAY BE FATAL IF SWALLOWED. CAN BURN ESOPHAGUS, STOMACH,
MOUTH & THROAT. WILL BURN SKIN ON CONTACT. CAN CAUSE BLINDNESS.
CHRONIC- NO CUMULATIVE EFFECT

Explanation of Carcinogenicity:NONE
Effects of Overexposure:SEVERE IRRITATION, SEVERE BURNS, TEARING,
SEVERE COUGHING, BRONCHIAL SPASMS, DESTRUCTION OF TISSUE ON ANY
EXPOSED PART OF THE BODY, CHEST PAIN, NAUSEA, VOMITING, DIFFICULT
BREATHING, DEATH
Medical Cond Aggravated by Exposure:PRE-EXISTING EYE DISORDERS, SKIN
DISORDERS OR IMPAIRED RESPIRATORY FUNCTION MAY BE MORE SUSCEPTIBLE
TO THE EFFECTS OF THIS MATERIAL.

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

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First Aid:GET MEDICAL ATTENTION IMMEDIATELY. SKIN:FLUSH WITH WATER, THEN WASH WITH SOAP & WATER. EYE:FLUSH WITH WATER FOR 15 MINUTES. HOLD EYELIDS OPEN. INHALED:REMOVE TO FRESH AIR. PROVIDE OXYGEN/CPR IF NEEDED . ORAL:IF CONSCIOUS, DRINK LARGE AMOUNTOF WATER FOLLOWED BY LEMON JUICE, ORANGE JUICE, EGG WHITE, VEGETABLE OIL. DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS.

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

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Flash Point:NOT FLAMMABLE

Autoignition Temp:Autoignition Temp Text:1204F

Lower Limits:16 AS NH3

Upper Limits:25 AS NH3

Extinguishing Media:WATER SPRAY, CARBON DIOXIDE, FOAM OR DRY CHEMICAL FOR SURROUNDING FIRE. USE WATER SPRAY TO COOL FIRE EXPOSED CONTAINERS.

Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A NIOSH-APPROVED FULL FACED SELF CONTAINED BREATHING APPARATUS. 1990 EMERGENCY RESPONSE GUIDEBOOK, GUIDE NO 60.

Unusual Fire/Explosion Hazard:AMMO

NIUM HYDROXIDE IS NON-COMBUSTIBLE AND

NON-EXPLOSIVE, BUT AMMONIA VAPORS RELEASED FROM SOLUTION CAN FORM EXPLOSIVE MIXTURE WITH AIR IN CONFINED AREAS.

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

Spill Release Procedures:VENTILATE AREA. WEAR PROTECTIVE CLOTHING AND RESPIRATOR. RECOVER IF POSSIBLE. NEUTRALIZE WITH DILUTE ACID OR SODIUM BISULFATE. FLUSH TO SEWER WITH LARGE AMOUNT OF WATER, IF PERMITTED. OTHERWISE, ABSOR B WITH SAND. TRANSFER TO A SUITABL

E

CONTAINER.

Neutralizing Agent:DILUTE ACETIC ACID, HCL, H2SO4, SODIUM BISULFATE

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

Handling and Storage Precautions:STORE IN COOL, WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS. PROTECT AGAINST PHYSICAL DAMAGE. KEEP OUT OF DIRECT SUNLIGHT.

Other Precautions:AVOID CONTACT WITH EITHER LIQUID OR VAPORS.

CONTAINERS SHOULD BE KEPT WELL SEALED WHEN NOT IN USE. MATERIAL MAY ATTACK ZN, CU, HG, SN AND THEIR AL

LOYS. KEEP OUT OF REACH OF CHILDREN. FOR LABORATORY USE ONLY. DO NOT BREATHE VAPORS.

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

Respiratory Protection:WORK IN FUME HOOD OR WEAR A NIOSH-APPROVED RESPIRATOR WITH AMMONIA CANISTER, IF NEEDED.

Ventilation:USE GENERAL OR LOCAL EXHAUST VENTILATION TO KEEP FUME OR VAPOR LEVELS AS LOW AS POSSIBLE.

Protective Gloves:RUBBER

Eye Protection:CHEMICAL GOGGLES AND FACE SHIELD

Other Protective Equipment:USE RUBBER SPLASH APRON. SAFETY SHOWER AND

EYEWASH FOUNTAIN SHOULD BE LOCATED NEARBY.

Work Hygienic Practices:OBSERVE GOOD INDUSTRIAL HYGIENE PRACTICES AND RECOMMENDED PROCEDURES. WASH THOROUGHLY BEFORE EATING, DRINKING/SMOKING.

Supplemental Safety and Health

PH (1.0 N AQUEOUS SOLUTION) = 11.6

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

HCC:B1

NRC/State Lic Num:NOT RELEVANT

Boiling Pt:=-27.C, 80.6F

Melt/Freeze Pt:=-77.C, -106.6F

Vapor Pres:501-561

Vapor Density:0.596

Spec Grav

ity:0.90

pH:ALKALI

Evaporation Rate & Reference: