

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

Product ID:AMMONIUM HYDROXIDE,ZINC OXIDE

MSDS Date:04/05/1993

FSC:6810

NIIN:01-386-5562

MSDS Number: CCVVN

=== Responsible Party ===

Company Name:POLY RESEARCH CORPORATION

Address:125 CORPORATE DRIVE

City:HOLTSVILLE

State:NY

ZIP:11742

Country:US

Info Phone Num:516-758-0460

Emergency Phone Num:516-758-0460

Chemtrec Ind/Phone:(800)424-9300

CAGE:64713

=== Contractor Identification ===

Company Name:POLY RESEARCH CORPORATION

Address:125 CORPORATE DRIVE

Box:City:HOLTSVILLE

State:NY

ZIP:11742-2007

Country:US

Phone:516-758-0460

CAGE:64713

Company Name:POLY SCIENTIFIC R&D CORP.

Address:70 CLEVELAND AVE

Box:City:BAY SHORE

State:NY

ZIP:11706

Country:US

Phone:516-586-0400

CAGE:67458

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

Ingred Name:AMMONIUM HYDROXIDE (CERCLA)

CAS:1336-21-6

RTECS #:BQ9625000

Fraction by Wt: 28 - 30%

Ot

her REC Limits:NONE RECOMMENDED

EPA Rpt Qty:1000 LBS

DOT Rpt Qty:1000 LBS

Ingred Name:ZINC OXIDE (SARA 313) (CERCLA)

CAS:1314-13-2

RTECS #:ZH4810000

Other REC Limits:NONE RECOMMENDED

OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10 MG/M3 TDUST; 9596

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

LD50 LC50 Mixture:LD50 (ORAL RAT) 350 MG/KG (RTECS, NH3)

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

Reports of Carcinogenicity:NTP:NO IARC:NO OSHA:NO

Health Hazards Acute an

d Chronic:TARGET ORGANS:EYES, SKIN, RESPIRATORY

& GI TRACTS. ACUTE- CORROSIVE. MAY CAUSE SEVERE EYE IRRITATION, EYE DAMAGE, BLINDNESS. CONTACT WITH SKIN MAY CAUSE SEVERE IRRITATION/BURNS. INHALATION MAY CAUSE S EVERE IRRITATION/BURNS OF RESPIRATORY SYSTEM, LUNG INFLAMMATION. INGESTION MAY BE FATAL. CAUSES BURNS. CHRONIC- UNKNOWN.

Explanation of Carcinogenicity:NONE

Effects of Overexposure:SEVERE IRRITATION, SEVERE BURNS, TEARING, SEVERE COUGHING, DESTRUCTION OF TISSUE ON

ANY EXPOSED PART OF THE

BODY, CHEST PAIN, NAUSEA, VOMITING, DIFFICULT BREATHING, DEATH, BLINDNESS

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 =====

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 =====

Flash Point:NONE

Lower Limits:NOT RELEVANT

Upper Limits:NOT RELEVANT

Extinguishing Media:WATER SPRAY. USE WATER SPRAY TO COOL FIRE EXPOSED CONT

AINERS.

Fire Fighting Procedures:WEAR FIRE FIGHTING PROTECTIVE EQUIPMENT AND A NIOSH-APPROVED FULL FACED SELF CONTAINED BREATHING APPARATUS.  
Unusual Fire/Explosion Hazard:AMMONIUM 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 SCBA. RECOVER IF POSSIBLE. NEUTRALIZE WITH DILUTE HCL/SODIUM BISULFATE. FLUSH TO SEWER WITH LARGE AMOUNT OF WATER, IF PERMITTED. OTHERWISE, ABSORB WITH SAND. TRANSFER TO A SUITABLE CONTAINER FOR DISPOSAL  
Neutralizing Agent:DILUTE ACETIC ACID, HCL, H<sub>2</sub>SO<sub>4</sub>, SODIUM BISULFATE

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

Handling and Storage Precautions:STORE IN COOL, WELL-VENTILATED AREA AWAY FROM INCOMPATIBLE MATERIALS. STORE IN A CORROSIVE PROOF AREA, BELOW 25C/77F.  
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 ALLOYS. 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 AND AFTER HANDLING.  
Supplemental Safety and Health

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

HCC:B1  
NRC/

State Lic Num:NOT RELEVANT

Boiling Pt:=28.3C, 83.F

Melt/Freeze Pt:=-77.8C, -108.F

Vapor Pres:720 @ 80F

Vapor Density:1.2

Spec Gravity:0.90

pH:ALKALI

Solubility in Water:MISCIBLE

Appearance and Odor:LIQUID WITH STRONG ACRID SUFFOCATING ODOR

Percent Volatiles by Volume:100

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

Stability Indicator/Materials to Avoid:YES

STRONG ACIDS, STRONG OXIDIZING AGENTS, FOOD PRODUCTS, DIMETHYL SULFATE,  
BRASS, BRONZ

Stability Condition to Avo

id:EXCESSIVE HEAT

Hazardous Decomposition Products:AMMONIA GAS AND NITROGEN OXIDES MAY BE  
FORMED.

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

Waste Disposal Methods:DISPOE OF IN ACCORDANCE WITH LOCAL, STATE AND  
FEDERAL REGULATIONS. CAREFULLY NEUTRALIZE WITH SODIUM BISULFATE AND  
FLUSH TO SEWER WITH LARGE AMOUNT OF WATER, IF PERMITTED.

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