

**Section 1: Product & Company Information**

**Product Identifier:** Ammonium Hydroxide, 2-5% (v/v)

**Other Means of Identification**

Product Number: No data available.

**Recommended Use and Restrictions on Use**

Recommended Use: No data available.

Restrictions on Use : No data available.

**Manufacturer / Importer / Supplier / Distributor Information**

**Company Name:** CORECHEM Inc.

**Address:** 4320 Greenway Drive  
Knoxville, TN 37918  
USA

**Information Telephone Number:** 1-865-524-4239

**Fax Number:** 1-865-524-3375

**Website:** www.corecheminc.com

**Contact Person:** Regulatory Manager

**E-mail:** regulatory@corecheminc.com

**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

**Section 2: Hazards Identification**

**GHS Hazard Classification(s)**

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

**Physical Hazard(s)**

Not classified.

**Health Hazard(s)**

Corrosion/Irritation, Skin - 2

(Corrosion)Damage/Irritation, Eye - 2A

Specific Target Organ Toxicity (STOT), Single exposure - 2

Specific Target Organ Toxicity (STOT), Repeated exposure - 2

**Environmental Hazard(s)**

Aquatic, Acute - 3

Aquatic, Chronic - 3

**Label Elements**

**Signal Word**

**WARNING**

**Hazard Symbol(s)**



**Hazard Statement(s)**

H315: Causes skin Irritation.

H319: Causes serious eye Irritation.

H371: May cause damage to organs.

H373: May cause damage to organs.

H402: Harmful to aquatic life.

H412: Harmful to aquatic life with long lasting effects.

**Precautionary Statements**

**General**

Not applicable.

**Prevention**

P260: Do not breathe dust/fume/gas/mist/vapors/spray.

P264: Wash face, hands and any exposed skin thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.  
 P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P309 + P311: IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.  
 P314: Get medical advice/attention if you feel unwell.  
 P321: Specific treatment (see supplemental first aid instructions on this label).  
 P332 + P313: If skin irritation occurs: Get medical advice/attention.  
 P337 + P313: If eye irritation persists: Get medical advice/attention.  
 P362: Take off contaminated clothing and wash before reuse.

**Storage**

P405: Store locked up.

**Disposal**

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Hazard(s) not otherwise classified (HNOC)**

None known.

## Section 3: Composition/Information on Ingredients

**Mixture**

Chemical Identity <sup>2</sup>	Common Name/Synonym(s)	CAS # <sup>3</sup>	Weight %	Impurity or Stabilizing Additive
Ammonium Hydroxide	-	1336-21-6	2 - 5%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

## Section 4: First-Aid Measures

**General Information**

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

**Inhalation**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin Contact**

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately! Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

**Eye Contact**

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

**Ingestion**

Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

**Most important symptoms/effects, acute and delayed**

**Symptoms**

This item is slightly corrosive. Use with adequate ventilation. Avoid contact with skin, eyes or clothing. Wash areas of contact with plenty of water. For eyes, get medical attention. EYE CONTACT: May cause slight irritation. SKIN CONTACT: May cause irritation, redness, and pain.

**Indication of immediate medical attention and special treatment needed**

**Hazards**

No data available.

**Treatment**

Specific treatment (Wash areas of contact with water).

## Section 5: Fire-Fighting Measures

**General Fire Hazards**

No data available.

**Suitable (and Unsuitable) Extinguishing Media**

**Suitable Extinguishing Media**

Extinguishing powder, alcohol resistant foam, carbon dioxide, water fog

**Unsuitable Extinguishing Media**

No data available.

**Specific Hazards Arising from the Chemical**

Flammable vapors may accumulate in confined spaces.

### Special Protective Equipment and Precautions for Firefighters

#### Special Fire-Fighting Equipment Procedures

No data available.

#### Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

## Section 6: Accidental Release Measures

### Personal Precautions, Protective Equipment and Emergency Procedures

Evacuate spill area. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low area. Remove all possible sources of ignition in the surrounding area. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment. Ventilate contaminated area thoroughly shut off leaks if possible without personal risk.

### Methods and Materials for Containment and Clean-Up

Ventilate area of leak or spill. Cover spill with a 1:1 mixture by weight of Sodium Carbonate or Calcium Carbonate, clay and sand. Scoop mixture into a plastic container and, in the fume hood, add to a pail of cold water. Neutralize this mixture with 5% Hydrochloric Acid, let stand overnight, then pour the liquid into the drain while flushing with water. Dispose of any solid with normal refuse. Wash the area of the spill with plenty of water.

### Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

### Environmental Precautions

No data available.

## Section 7: Handling and Storage

### Precautions for Safe Handling

Use caution when handling/transferring. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible. Observe good industrial hygiene practices.

### Conditions for Safe Storage, including any Incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (See Section 10). Ensure that all local regulations regarding handling and storage facilities are followed.

## Section 8: Exposure Controls/Personal Protection

### Control Parameters

#### Occupational Exposure Limits

The product does not contain any relevant quantities of hazardous materials with critical values that have to be monitored in the workplace.

#### Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

### Appropriate Engineering Controls

No data available.

### Individual protection measures, such as personal protective equipment (PPE)

#### General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

#### Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

#### Skin Protection

##### Hand Protection

Wear appropriate chemical resistant gloves.

##### Other

Wear appropriate chemical resistant clothing.

#### Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

#### Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

## Section 9: Physical and Chemical Properties

### Appearance:

Physical State:	Liquid
Color:	Colorless
<b>Odor:</b>	No data available.
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	11.5
<b>Melting Point/Freezing Point:</b>	0.0°C
<b>Initial Boiling Point and Boiling Range:</b>	100°C
<b>Flash Point:</b>	No data available.
<b>Evaporation Rate</b> (butyl acetate=1):	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/Lower Limit on Flammability or Explosive Limits</b>	
Flammability Limit – Upper:	No data available.
Flammability Limit – Lower:	No data available.
Explosive Limit – Upper:	No data available.
Explosive Limit – Lower:	No data available.
<b>Vapor Pressure:</b>	No data available.
<b>Vapor Density</b> (air =1):	No data available.
<b>Relative Density</b> (water=1):	0.90 – 1.01
<b>Solubility(ies):</b>	
Solubility in water:	Miscible
Solubility (other):	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-Ignition Temperature:</b>	No data available.
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other Information:</b>	
Molecular Weight:	No data available.
Formula:	No data available.

## Section 10: Stability and Reactivity

### Reactivity

No dangerous reaction known under conditions of normal use.

### Chemical Stability

Material is stable under normal conditions.

### Possibility of Hazardous Reactions

No data available.

### Conditions to Avoid

No data available.

### Incompatible Materials

Strong oxidizers, acids, Calcium Hypochlorite bleaches, gold, mercury, silver, halogens.

### Hazardous Decomposition Products

Will not occur.

## Section 11: Toxicological Information

### Information on routes of exposure

**Ingestion:** Causes gastrointestinal irritation.

**Inhalation:** Causes respiratory irritation.

**Skin Contact:** Causes skin irritation.

**Eye Contact:** Causes serious eye irritation.

### Information on Toxicological Effects

#### Acute Toxicity (List all possible routes of exposure)

##### Oral

LD50, Oral, Rat: 350 mg/kg (Ammonium Hydroxide), gastrointestinal, liver, kidney, ureter, bladder changes.

LDLo, Oral, Human: 43 mg/kg

##### Dermal

Not applicable.

##### Inhalation

LCLo, Inhalation, Human: 5000 ppm, details of toxic effects not reported other than lethal dose value.

##### Repeated Dose Toxicity

Not applicable.

### Skin Corrosion/Irritation

Causes skin irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF ON SKIN: Wash with plenty of soap and water. Specific treatment (Wash areas of contact with water). If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash it before reuse.

**Serious Eye Damage/Eye Irritation**

Causes serious eye irritation. Wash arms, hands and face thoroughly after handling. Wear protective gloves and eye protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

**Respiratory/Skin Sensitization**

No data available.

**Carcinogenicity**

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans**

No data available.

**US. National Toxicology Program (NTP) Report on Carcinogens**

No data available.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

No data available.

**Germ Cell Mutagenicity**

**In Vitro**

No data available.

**In Vivo**

No data available.

**Reproductive Toxicity**

No data available.

**Specific Target Organ Toxicity – Single Exposure**

May cause damage to organs. Do not breathe dust, fumes or mist. Wash arms, hands and face thoroughly after handling. Do not eat, drink or smoke when using this product. IF exposed or concerned: Call a POISON CENTER or physician. Store locked up. Dispose of contents in accordance with local, state, federal and international regulations.

**Specific Target Organ Toxicity – Repeated Exposure**

May cause damage to organs through prolonged or repeated exposure. Do not breathe dust, fumes or mist. Get medical attention if you feel unwell. Dispose of contents in accordance with local, state, federal and international regulations.

**Aspiration Hazard**

No data available.

**Other Effects**

No data available.

**Section 12: Ecological Information**

**Ecotoxicity**

**Acute Hazards to the Aquatic Environment**

**Fish**

No data available.

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

No data available.

**Chronic Hazards to the Aquatic Environment**

**Fish**

No data available.

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

No data available.

**Persistence and Degradability**

**Biodegradation**

There are no data on the degradability of this product.

**BOD/COD Ratio**

No data available.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

No data available.

**Mobility in Soil**

No data available.

**Other Adverse Effects**

No data available.

### Section 13: Disposal Considerations

#### Disposal Instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

### Section 14: Transportation Information

#### US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

### Section 15: Regulatory Information

#### US Federal Regulations

##### Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

##### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:

Ammonium Hydroxide (CAS # 1336-21-6)

##### Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

##### Emergency Planning and Community Right-To-Know Act (EPCRA)

###### EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

###### EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

###### EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No  
Sudden Release of Pressure: No  
Reactive: No  
Acute (Immediate) Health Hazard: Yes  
Chronic (Delayed) Health Hazard: No

###### EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

The following chemical(s) in this material are subject to reporting levels established by SARA Title III, Section 313:  
Ammonium Hydroxide (CAS # 1336-21-6)

#### US State Regulations

##### California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

*Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.*

### Section 16: Other Information

#### Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 1

Chronic Health Hazard: /

Flammability: 0

Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

#### National Fire Protection Association (NFPA 704) Rating

Health Hazard: 1

Fire Hazard: 0

Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Revisions: -

## Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate	ACGIH - American Conference of Industrial Hygienists
BCF - Bioconcentration Factor	AIHA - American Industrial Hygiene Association
EC50 - Effective concentration, 50%	BEI - Biological Exposure Indices
IDHL - Immediately Dangerous to Life and Health	CAS - Chemical Abstracts Service
Kg - Kilogram	DOT - US Department of Transportation
l - Liter	EPA - US Environmental Protection Agency
lb - Pound	GHS - Globally Harmonized System of Classification and Labelling of Chemicals
LC50 - Lethal Concentration, 50%	IARC - International Agency for Research on Cancer
LD50 - Lethal Dose, 50%	IATA - International Air Transport Association
mg - milligram	IBC - Intermediate Bulk Container
ml - milliliter	IMDG - International Maritime Dangerous Goods
N/A - Not Applicable	NIOSH - National Institute for Occupational Safety and Health
N/D - Not Determined	NTP - National Toxicology Program
PEL - Permissible Exposure Limit	OSHA - US Occupational Health and Safety Administration
REL - Recommended Exposure Limit	SARA - US EPA Superfund Amendments and Reauthorization Act
STEL - Short-term Exposure Limit	TSCA - US EPA Toxic Substances Control Act
TWA - Time weighted average	UN - United Nations

## References

HSDB® - Hazardous Substances Data Bank

## Disclaimer

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