



## Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

### SECTION 1: Identification

#### 1.1. Product Identifier

**Trade Name or Designation** Copper Tetrammine, Ammoniacal Solution

EP Reagent 1022600

**Product Number** R2370000

**Other Identifying Product Numbers** R2370000-250A, R2370000-500A

#### 1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

#### 1.3. Details of the Supplier of the Safety Data Sheet

**Company** Ricca Chemical Company

**Address** 412 West Fork Drive

Arlington, TX 76012 USA

**Telephone** 888-467-4222

#### 1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA)

800-424-9300

CHEMTREC (International)

1+ 703-527-3887

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### SECTION 2: Hazard(s) Identification

#### 2.1. Classification of the Substance or Mixture

| Hazard Class                                              | Category   | Hazard Statements | Precautionary Statements                                                                                |
|-----------------------------------------------------------|------------|-------------------|---------------------------------------------------------------------------------------------------------|
| Acute Toxicity - Inhalation (Vapors)                      | Category 4 | H332              | P261,P271,P304+P340,P312                                                                                |
| Corrosive to the Respiratory Tract                        | Corrosive  |                   |                                                                                                         |
| Skin Corrosion / Irritation                               | Category 1 | H314              | P260,P264,P280,P301+P330+P331,<br>P303+P361+P353,P363,P304+P340,<br>P310,P321,P305+P351+P338,P405, P501 |
| Serious Eye Damage / Eye Irritation                       | Category 1 | H318              | P280,P305+P351+P338,P310                                                                                |
| Hazardous to the Aquatic Environment, Short-term (Acute)  | Acute 1    | H400              | P273,P391,P501                                                                                          |
| Hazardous to the Aquatic Environment, Long-term (Chronic) | Chronic 2  | H411              | P273,P391,P501                                                                                          |

#### 2.2. GHS Label Elements

##### Pictograms:



Signal Word: **Danger**

##### Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

| Hazard Number | Hazard Statement                                |
|---------------|-------------------------------------------------|
| H314          | Causes severe skin burns and eye damage         |
| H332          | Harmful if inhaled                              |
| H400          | Very toxic to aquatic life                      |
| H411          | Toxic to aquatic life with long lasting effects |
|               | Corrosive to the respiratory tract              |

##### Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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## Prevention

| Precautionary Number | Precautionary Statement                               |
|----------------------|-------------------------------------------------------|
| P260                 | Do not breathe fumes or mist.                         |
| P264                 | Wash hands, arms, and face thoroughly after handling. |
| P271                 | Use only outdoors or in a well-ventilated area.       |
| P273                 | Avoid release to the environment.                     |
| P280                 | Wear protective gloves and eye protection.            |

## Response

| Precautionary Number | Precautionary Statement                                                                                                          |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| P301+P330+P331       | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.                                                                               |
| P303+P361+P353       | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.                           |
| P304+P340            | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |
| P305+P351+P338       | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310                 | Immediately call a poison center or doctor.                                                                                      |
| P363                 | Wash contaminated clothing before reuse.                                                                                         |
| P391                 | Collect spillage.                                                                                                                |

## Storage

| Precautionary Number | Precautionary Statement |
|----------------------|-------------------------|
| P405                 | Store locked up.        |

## Disposal

| Precautionary Number | Precautionary Statement                                                                                                         |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------|
| P501                 | Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations. |

## 2.3. Hazards not Otherwise Classified

No other hazards identified.

## 2.4. Ingredients of Unknown Acute Toxicity

17.8 percent of this mixture consists of ingredient(s) of unknown acute oral and dermal toxicity. 11.1 percent of this mixture consists of ingredient(s) of unknown acute inhalation toxicity.

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### SECTION 3: Composition / Information on Ingredients

#### 3.1. Components of Mixture

| Chemical Name (IUPAC)       | Common Name and Synonyms                                                  | CAS Number | Weight% |
|-----------------------------|---------------------------------------------------------------------------|------------|---------|
| water                       | Water                                                                     | 7732-18-5  | 73.41   |
| ammonium hydroxide          | Ammonium Hydroxide; Aqueous ammonia                                       | 1336-21-6  | 15.48   |
| copper sulfate pentahydrate | Copper Sulfate Pentahydrate; Sulfuric acid, copper(2+) salt, pentahydrate | 7758-99-8  | 8.81    |
| sodium hydroxide            | Sodium Hydroxide; caustic soda                                            | 1310-73-2  | 2.30    |

### SECTION 4: First-Aid Measures

#### 4.1. Description of Necessary Measures

**Eye Contact:** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause severe irritation with possible permanent damage.

**Ingestion:** IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

**Inhalation:** IF INHALED: Remove person to fresh air and keep comfortable for breathing.

**Skin Contact:** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. May cause serious damage to the skin. Effects may include redness, pain, skin burns.

#### 4.2. Most Important Symptoms and Effects, Acute and Delayed

Harmful if inhaled WARNING! Hazardous fumes and liquid. Use with adequate ventilation. Avoid breathing vapor. Avoid contact with skin, eyes, or clothing. If ingested, do not induce vomiting. Give large quantity of water and call a physician. Wash areas of contact with plenty of water. For eyes, get medical attention. EYE CONTACT: May cause severe irritation with possible permanent damage. SKIN CONTACT: May cause serious damage to the skin. Effects may include redness, pain, skin burns.

#### 4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor. Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Do not induce vomiting. Give large quantity of water. Call a physician immediately.

### SECTION 5: Fire-Fighting Measures

#### 5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire. Use water spray to blanket fire, cool fire exposed containers, and to flush non-ignited spills or vapors away from fire.

#### 5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Flammable vapors may accumulate in confined spaces.



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### 5.3. Special Protective Equipment and Precautions for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## SECTION 6: Accidental Release Measures

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

### 6.2. Cleanup and Containment Methods and Materials

Ventilate area of leak or spill. Absorb with suitable material and containerize for proper disposal with a RCRA approved waste disposal facility. Do not flush to sewer. Always comply with local, state and federal regulations.

## SECTION 7: Handling and Storage

### 7.1. Precautions for Safe Handling and Storage Conditions

Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Do not mix with acids.

## SECTION 8: Exposure Controls / Personal Protection

### 8.1. Exposure Limits

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### U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

| Chemical Name      | CAS Number | Exposure Limit                                    |
|--------------------|------------|---------------------------------------------------|
| Sodium Hydroxide   | 1310-73-2  | 2 mg/m3 TWA                                       |
| Ammonium Hydroxide | 1336-21-6  | "50 ppm TWA; 35 mg/m3 TWA" As Ammonia [7664-41-7] |

### U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

### U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

### U.S. OSHA - Specifically Regulated Chemicals

No limits found.

### ACGIH - Threshold Limit Values - Ceilings (TLV-C)

| Chemical Name    | CAS Number | Exposure Limit  |
|------------------|------------|-----------------|
| Sodium Hydroxide | 1310-73-2  | 2 mg/m3 Ceiling |

### ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

| Chemical Name      | CAS Number | Exposure Limit                       |
|--------------------|------------|--------------------------------------|
| Ammonium Hydroxide | 1336-21-6  | "35 ppm STEL" As Ammonia [7664-41-7] |

### ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

| Chemical Name               | CAS Number | Exposure Limit                                                        |
|-----------------------------|------------|-----------------------------------------------------------------------|
| Ammonium Hydroxide          | 1336-21-6  | "25 ppm TWA" As Ammonia [7664-41-7]                                   |
| Copper Sulfate Pentahydrate | 7758-99-8  | "1 mg/m3 TWA (dust and mist, as Cu)" As Copper compounds [RR-00595-8] |

## 8.2. Engineering Controls

Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit.

## 8.3. Individual Protective Measures and Personal Protective Equipment

**Respiratory Protection:** If the TLV is exceeded, a full-face chemical cartridge respirator may be worn up to 50 times the TLV or the maximum use concentration specified by the respirator supplier, whichever is less.

**Skin Protection:** Chemical resistant gloves.

**Eye Protection:** Safety glasses or goggles.

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## SECTION 9: Physical and Chemical Properties

### 9.1. Basic Physical and Chemical Properties

|                                                   |                     |
|---------------------------------------------------|---------------------|
| <b>Physical State:</b>                            | liquid              |
| <b>Color:</b>                                     | Blue                |
| <b>Odor:</b>                                      | Data not available. |
| <b>Odor Threshold:</b>                            | Data not available. |
| <b>Melting/Freezing Point:</b>                    | Data not available. |
| <b>Boiling Point/Range:</b>                       | Data not available. |
| <b>Flammability:</b>                              | Data not available. |
| <b>Flammability/Explosive Limits:</b>             | Data not available. |
| <b>Flash Point:</b>                               | Not flammable       |
| <b>Auto-Ignition Temperature:</b>                 | Data not available. |
| <b>Decomposition Temperature:</b>                 | Data not available. |
| <b>pH:</b>                                        | Alkaline            |
| <b>Kinematic Viscosity:</b>                       | Data not available. |
| <b>Solubility:</b>                                | miscible            |
| <b>Vapor Pressure:</b>                            | Data not available. |
| <b>Evaporation Rate:</b>                          | Data not available. |
| <b>Relative Density:</b>                          | 0.9                 |
| <b>Relative Vapor Density:</b>                    | Data not available. |
| <b>Particle Characteristics:</b>                  | Data not available. |
| <b>Partition Coefficient n-octanol/water, log</b> | Data not available. |

## SECTION 10: Stability and Reactivity

### 10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

### 10.2. Possibility of Hazardous Reactions

Data not available.

### 10.3. Conditions to Avoid and Incompatible Materials

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

### 10.4. Hazardous Decomposition Products

Will not occur.

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### SECTION 11: Toxicological Information

#### 11.1. Information on Toxicological Effects

##### Acute Toxicity - Oral Exposure:

Not acutely toxic.

| Chemical Name               | CAS Number | Toxicity                                       |
|-----------------------------|------------|------------------------------------------------|
| Copper Sulfate Pentahydrate | 7758-99-8  | Oral LD50 Rat 794 mg/kg (Source: Canada_WHMIS) |

##### Acute Toxicity - Dermal Exposure:

No information found.

| Chemical Name               | CAS Number | Toxicity                                      |
|-----------------------------|------------|-----------------------------------------------|
| Copper Sulfate Pentahydrate | 7758-99-8  | Dermal LD50 Rabbit >8 g/kg (Source: NLM_HSDB) |

##### Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 17.2267 mg/L, 4 h(calculated)

| Chemical Name      | CAS Number | Toxicity                                                          |
|--------------------|------------|-------------------------------------------------------------------|
| Ammonium Hydroxide | 1336-21-6  | Inhalation LC50 Acute Toxicity Estimate 3 mg/L 4 h (Source: ECHA) |

#### 11.2 Carcinogenicity:

##### International Agency for Research on Cancer (IARC)

| Chemical Name  | CAS Number | Classification |
|----------------|------------|----------------|
| No data found. |            |                |

##### National Toxicology Program (NTP)

| Chemical Name  | CAS Number | Classification |
|----------------|------------|----------------|
| No data found. |            |                |

##### U.S. OSHA specifically regulated carcinogens

| Chemical Name  | CAS Number | Classification |
|----------------|------------|----------------|
| No data found. |            |                |

#### 11.3 Additional Toxicology Information:

Causes severe skin burns and eye damage. Harmful if inhaled. Corrosive to the respiratory tract.

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### SECTION 12: Ecological Information

#### 12.1. Ecotoxicity

| Chemical Name               | CAS Number | Species         | Exposure | Toxicity                                                                                                                                                                                                                                                                                                                          |
|-----------------------------|------------|-----------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sodium Hydroxide            | 1310-73-2  | Freshwater Fish | Acute    | LC50 96 h Oncorhynchus mykiss 45.4 mg/L [static] (IUCLID)                                                                                                                                                                                                                                                                         |
| Ammonium Hydroxide          | 1336-21-6  | Freshwater Fish | Acute    | LC50 96 h Pimephales promelas 8.2 mg/L                                                                                                                                                                                                                                                                                            |
| Copper Sulfate Pentahydrate | 7758-99-8  | Freshwater Fish | Acute    | LC50 96 h Lepomis macrochirus 0.66 - 1.15 mg/L [semi-static] (EPA); LC50 96 h Lepomis macrochirus 0.96 - 1.8 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 0.1478 - 0.165 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 0.09 - 0.19 mg/L [static] (EPA); LC50 96 h Pimephales promelas 0.6752 mg/L [static] (EPA) |
| Ammonium Hydroxide          | 1336-21-6  | Water Flea      | Acute    | EC50 48 h water flea 0.66 mg/L; EC50 48 h Daphnia pulex 0.66 mg/L                                                                                                                                                                                                                                                                 |
| Copper Sulfate Pentahydrate | 7758-99-8  | Water Flea      | Acute    | EC50 48 h Daphnia magna 0.147 - 0.227 mg/L [Static] (EPA)                                                                                                                                                                                                                                                                         |

#### 12.2. Persistence and Degradability

Data not available.

#### 12.3. Bioaccumulative Potential

Data not available.

#### 12.4. Mobility in soil

Data not available.

#### 12.5. Other Adverse Ecological Effects

Data not available.

### SECTION 13: Disposal Considerations

#### 13.1. Waste Treatment Methods

Data not available.

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## SECTION 14: Transportation Information

### 14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

**Sizes:** 250 mL, 500 mL

**UN Number:** UN2672

**Proper Shipping Name:** Ammonia Solution

**Hazard Class:** 8

**Packing Group:** III

**Hazard Label(s):**



### 14.2 Transportation by Air - International Air Transport Association (IATA)

**Sizes:** 250 mL, 500 mL

**UN Number:** UN2672

**Proper Shipping Name:** Ammonia Solution

**Hazard Class:** 8

**Packing Group:** III

**Hazard Label(s):**



### 14.3 Transportation of Dangerous Goods (TDG, Canada)

**Sizes:** 250 mL, 500 mL

**UN Number:** UN2672

**Proper Shipping Name:** AMMONIA SOLUTION

**Hazard Class:** 8

**Packing Group:** III

**Hazard Label(s):**



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### SECTION 15: Regulatory Information

#### 15.01. Occupational Safety and Health Administration (OSHA) Hazards

| Chemical Name  | CAS Number | Regulatory Information |
|----------------|------------|------------------------|
| No data found. |            |                        |

#### 15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

| Chemical Name      | CAS Number | RQ                                  | TPQ                                      |
|--------------------|------------|-------------------------------------|------------------------------------------|
| Ammonium Hydroxide | 1336-21-6  | "500 lb TPQ" As Ammonia [7664-41-7] | "100 lb EPCRA RQ" As Ammonia [7664-41-7] |

#### 15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

| Chemical Name               | CAS Number | Regulatory Information                                           |
|-----------------------------|------------|------------------------------------------------------------------|
| Sodium Hydroxide            | 1310-73-2  | 1000 lb final RQ; 454 kg final RQ                                |
| Ammonium Hydroxide          | 1336-21-6  | 1000 lb final RQ; 454 kg final RQ                                |
| Copper Sulfate Pentahydrate | 7758-99-8  | "10 lb final RQ; 4.54 kg final RQ" As Cupric sulfate [7758-98-7] |

#### 15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

| Chemical Name      | CAS Number | List               | Regulatory Information                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------|------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ammonium Hydroxide | 1336-21-6  | Emission Reporting | "1.0 % de minimis concentration (includes anhydrous Ammonia and aqueous Ammonia from water dissociable Ammonium salts and other sources, 10% of total aqueous Ammonia is reportable under this listing)" As Ammonia [7664-41-7];<br>"1.0 % de minimis concentration (10% of total aqueous Ammonia is reportable under this listing)" As Aqueous ammonia from water dissociable ammonium salts and other sources [RR-47925-4] |

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|                                |           |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------|-----------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Copper Sulfate<br>Pentahydrate | 7758-99-8 | Emission Reporting | "1.0 % de minimis concentration (includes any unique chemical substance that contains Copper as part of that chemical's infrastructure except for CAS numbers 147-14-8, 1328-53-6, or 14302-13-7, or copper phthalocyanine compounds that are substituted with only Hydrogen and/or Bromine and/or Chlorine that meet the molecular structure specified within the regulation, listed under Chemical Category N100)" As Copper compounds [RR-00595-8] |
|--------------------------------|-----------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 15.05. Massachusetts Right-to-Know Substance List

| Chemical Name                  | CAS Number | Regulatory Information                  |
|--------------------------------|------------|-----------------------------------------|
| Sodium Hydroxide               | 1310-73-2  | Present                                 |
| Ammonium Hydroxide             | 1336-21-6  | Present                                 |
| Copper Sulfate<br>Pentahydrate | 7758-99-8  | "Present" As Cupric sulfate [7758-98-7] |

### 15.06. Pennsylvania Right-to-Know Hazardous Substances

| Chemical Name                  | CAS Number | Regulatory Information                                                                                                                 |
|--------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Sodium Hydroxide               | 1310-73-2  | Environmental hazard                                                                                                                   |
| Ammonium Hydroxide             | 1336-21-6  | Environmental hazard                                                                                                                   |
| Copper Sulfate<br>Pentahydrate | 7758-99-8  | "Environmental hazard" As Sulfuric acid, copper(2+) salt (1:1) [7758-98-7];<br>"Environmental hazard" As Copper compounds [RR-00595-8] |

### 15.07. New Jersey Worker and Community Right-to-Know Components

| Chemical Name                  | CAS Number | Regulatory Information                                                                 |
|--------------------------------|------------|----------------------------------------------------------------------------------------|
| Sodium Hydroxide               | 1310-73-2  | sn 1706                                                                                |
| Ammonium Hydroxide             | 1336-21-6  | sn 0103                                                                                |
| Copper Sulfate<br>Pentahydrate | 7758-99-8  | "sn 0549" As Cupric sulfate [7758-98-7];<br>"sn 2215" As Copper compounds [RR-00595-8] |

### 15.08. California Proposition 65

| Chemical Name  | CAS Number | Regulatory Information |
|----------------|------------|------------------------|
| No data found. |            |                        |

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## 15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

| Chemical Name               | CAS Number | List | Status                                  |
|-----------------------------|------------|------|-----------------------------------------|
| Sodium Hydroxide            | 1310-73-2  | DSL  | Present                                 |
| Ammonium Hydroxide          | 1336-21-6  | DSL  | Present                                 |
| Water                       | 7732-18-5  | DSL  | Present                                 |
| Copper Sulfate Pentahydrate | 7758-99-8  | DSL  | "Present" As Cupric sulfate [7758-98-7] |

## 15.10. United States of America Toxic Substances Control Act (TSCA) List

| Chemical Name               | CAS Number | Status                                                                 |
|-----------------------------|------------|------------------------------------------------------------------------|
| Sodium Hydroxide            | 1310-73-2  | Present (ACTIVE)                                                       |
| Ammonium Hydroxide          | 1336-21-6  | Present (ACTIVE)                                                       |
| Water                       | 7732-18-5  | Present [XU] (ACTIVE)                                                  |
| Copper Sulfate Pentahydrate | 7758-99-8  | "Present (ACTIVE)" As Sulfuric acid, copper(2+) salt (1:1) [7758-98-7] |

## 15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

| Chemical Name               | CAS Number | List   | Number                                     |
|-----------------------------|------------|--------|--------------------------------------------|
| Sodium Hydroxide            | 1310-73-2  | EINECS | 215-185-5                                  |
| Ammonium Hydroxide          | 1336-21-6  | EINECS | 215-647-6                                  |
| Water                       | 7732-18-5  | EINECS | 231-791-2                                  |
| Copper Sulfate Pentahydrate | 7758-99-8  | EINECS | "231-847-6" As Copper sulphate [7758-98-7] |

## 15.12. China - Inventory of Existing chemical Substances (IECSC)

| Chemical Name               | CAS Number | Status          |
|-----------------------------|------------|-----------------|
| Sodium Hydroxide            | 1310-73-2  | Present [27689] |
| Ammonium Hydroxide          | 1336-21-6  | Present [27662] |
| Water                       | 7732-18-5  | Present [32224] |
| Copper Sulfate Pentahydrate | 7758-99-8  | Present [35060] |

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### 15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

| Chemical Name               | CAS Number | List    | Status                                                          |
|-----------------------------|------------|---------|-----------------------------------------------------------------|
| Sodium Hydroxide            | 1310-73-2  | Annex 1 | Present [KE-31487]                                              |
| Ammonium Hydroxide          | 1336-21-6  | Annex 1 | Present [KE-01688]                                              |
| Water                       | 7732-18-5  | Annex 1 | Present [KE-35400]                                              |
| Copper Sulfate Pentahydrate | 7758-99-8  | Annex 1 | "Present [KE-08956]" As Cupric sulfate [7758-98-7]              |
| Copper Sulfate Pentahydrate | 7758-99-8  | Annex 2 | "97-3-718 (1997-3-0718)" As Inorganic copper salts [RR-03690-8] |

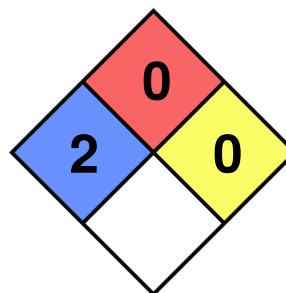
### 15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

| Chemical Name               | CAS Number | MITI No.                                             |
|-----------------------------|------------|------------------------------------------------------|
| Sodium Hydroxide            | 1310-73-2  | (1)-410                                              |
| Ammonium Hydroxide          | 1336-21-6  | (1)-314                                              |
| Water                       | 7732-18-5  | - (listed on Japanese Pharmacopoeia 8th Edition)     |
| Copper Sulfate Pentahydrate | 7758-99-8  | (1)-300 (not considered as a new chemical substance) |

## SECTION 16: Other Information

### 16.1 National Fire Protection Associate (NFPA) Rating

**Health:** 2  
**Flammability:** 0  
**Reactivity:** 0  
**Special Hazard:**



### 16.2 Document Revision

**Last Revision Date:**  
 2026-05-22

## DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.