Copper Reagent #1

SECTION 1: Identification

Product identifier

Product name: Copper Reagent #1
Product code: CU4001SS

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory chemicals
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331
1-717-632-1291

Emergency telephone number:

Canada
ChemTel: (24-hour)
+1(800)255-3924
+1(813)248-0585 (International)

SECTION 2: Hazard(s) identification

GHS classification:

Eye irritation, category 2A
Skin irritation, category 2

Label elements

Hazard pictograms:

Signal word: Warning

Hazard statements:

H319 Causes serious eye irritation.
H315 Causes skin irritation.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P321 Specific treatment (see supplemental first aid instructions on this label).
P362 Take off contaminated clothing and wash before reuse.
P302+P352 If on skin: Wash with soap and water.
P332+P313 If skin irritation occurs: Get medical advice/attention.

Hazards not otherwise classified: None

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SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 1336-21-6	Ammonium Hydroxide	1.53
CAS number: 12125-02-9	Ammonium Chloride	15
CAS number: 7732-18-5	Water	83.47

Additional Information: None

SECTION 4: First aid measures

Description of first aid measures

General notes:

Not determined or not applicable.

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway
Get medical advice/attention if you feel unwell

After skin contact:

Wash affected area with soap and water
Seek medical attention if symptoms develop or persist

After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes
Remove contact lens(es) if able to do so during rinsing
Seek medical attention if irritation persists or if concerned

After swallowing:

Rinse mouth and then drink plenty of water
Do not induce vomiting
Get medical advice/attention if you feel unwell

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Not determined or not applicable.

Delayed symptoms and effects:

Not determined or not applicable.

Immediate medical attention and special treatment

Specific treatment:

Not determined or not applicable.

Notes for the doctor:

Not determined or not applicable.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

Unsuitable extinguishing media:
Not determined or not applicable.

Specific hazards during fire-fighting:
Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:
Wear protective eye wear, gloves and clothing
Refer to Section 8
Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

Special precautions:
Heating causes a rise in pressure, risk of bursting and combustion
Shut off sources of ignition
Carbon monoxide and carbon dioxide may form upon combustion

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:
Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:
Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)
Dispose of contents / container in accordance with local regulations

Reference to other sections:
Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:
Do not eat, drink, smoke or use personal products when handling chemical substances.
Avoid breathing mist or vapor.
Use only with adequate ventilation.

Conditions for safe storage, including any incompatibilities:
Store in a cool, well-ventilated area.
Store away from foodstuffs.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
ACGIH	Ammonium Chloride	12125-02-9	ACGIH TLV TWA 10.0 mg/m³
	Ammonium Chloride	12125-02-9	ACGIH TLV STEL 20.0 mg/m³
	Ammonium Hydroxide	1336-21-6	ACGIH TLV TWA 25 ppm (NH_3)
	Ammonium Hydroxide	1336-21-6	ACGIH TLV STEL 35 ppm (NH_3)
United States (OSHA)	Ammonium Hydroxide	1336-21-6	OSHA PEL TWA 50 ppm (NH_3)

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Ammonium Hydroxide	1336-21-6	OSHA PEL TWA 35 mg/m³ (NH_3)
NIOSH	Ammonium Hydroxide	1336-21-6	NIOSH REL TWA 25 ppm (NH_3)
	Ammonium Hydroxide	1336-21-6	NIOSH REL TWA 18 mg/m³ (NH_3)
	Ammonium Hydroxide	1336-21-6	NIOSH REL ST 35 ppm (NH_3)
	Ammonium Hydroxide	1336-21-6	NIOSH REL ST 27 mg/m³ (NH_3)
	Ammonium Chloride	12125-02-9	NIOSH REL TWA 10.0 mg/m³
	Ammonium Chloride	12125-02-9	NIOSH REL ST 20.0 mg/m³

Biological limit values:
No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:
Not determined or not applicable.

Appropriate engineering controls:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Personal protection equipment

Eye and face protection:
Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:
Select glove material impermeable and resistant to the substance.

Respiratory protection:
When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:
Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.
Perform routine housekeeping.
Wash contaminated clothing before reusing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
Odor	Odorless
Odor threshold	Not available
pH	8.5
Melting point/freezing point	Approx. 0°C
Initial boiling point/range	Approx. 100°C
Flash point (closed cup)	Not available
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper flammability/explosive limit	Not available
Lower flammability/explosive limit	Not available
Vapor pressure	Not available

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Vapor density	Not available
Density	Not available
Relative density	Approx. 1
Solubilities	Not determined or not available.
Partition coefficient (n-octanol/water)	Not available
Auto/Self-ignition temperature	Not available
Decomposition temperature	Not available
Dynamic viscosity	Not available
Kinematic viscosity	Not available
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.
Chemical stability:
Stable under normal conditions of use and storage.
Possibility of hazardous reactions:
None under normal conditions of use and storage.
Conditions to avoid:
None known.
Incompatible materials:
None known.
Hazardous decomposition products:
None known.

SECTION 11: Toxicological information

Acute toxicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data:

Name	Route	Result
Ammonium Chloride	oral	LD50 - Mouse: 1300 mg/kg

Skin corrosion/irritation

Assessment: Causes skin irritation
Product data: No data available.
Substance data:

Name	Result
Ammonium Hydroxide	Causes severe skin burns and eye damage.

Serious eye damage/irritation

Assessment: Causes serious eye irritation
Product data: No data available.
Substance data:

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Name	Result
Ammonium Chloride	Causes serious eye irritation.

Respiratory or skin sensitization

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC): None of the ingredients are listed.

National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.

Product data: No data available.

Substance data:

Name	Result
Ammonium Hydroxide	LC50 - Coho salmon - 0.45 mg/L - 96 h

Chronic (long-term) toxicity

Product data: No data available.

Substance data: No data available.

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Persistence and degradability

Product data: No data available.

Substance data: No data available.

Bioaccumulative potential

Product data: No data available.

Substance data: No data available.

Mobility in soil

Product data: No data available.

Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

United States Transportation of dangerous goods (49 CFR DOT)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not Regulated
UN proper shipping name	Not Regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None

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Pollution category	None

SECTION 15: Regulatory information

United States regulations

Inventory listing (TSCA):

12125-02-9	Ammonium Chloride	Listed
7732-18-5	Water	Listed
1336-21-6	Ammonium Hydroxide	Listed

Significant New Use Rule (TSCA Section 5): Not determined.

Export notification under TSCA Section 12(b): Not determined.

SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
No	No	No	No	No

SARA Section 302 extremely hazardous substances: Not determined.

SARA Section 313 toxic chemicals:

1336-21-6	Ammonium Hydroxide	Listed

CERCLA:

12125-02-9	Ammonium Chloride	Listed	5000
1336-21-6	Ammonium Hydroxide	Listed	1000

RCRA: Not determined.

Section 112(r) of the Clean Air Act (CAA): Not determined.

Massachusetts Right to Know:

7732-18-5	Water	Not Listed
12125-02-9	Ammonium Chloride	Not Listed
1336-21-6	Ammonium Hydroxide	Listed

New Jersey Right to Know:

7732-18-5	Water	Not Listed
12125-02-9	Ammonium Chloride	Not Listed
1336-21-6	Ammonium Hydroxide	Not Listed

New York Right to Know:

7732-18-5	Water	Not Listed
12125-02-9	Ammonium Chloride	Not Listed
1336-21-6	Ammonium Hydroxide	Listed

Pennsylvania Right to Know:

7732-18-5	Water	Not Listed
12125-02-9	Ammonium Chloride	Not Listed

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1336-21-6	Ammonium Hydroxide	Listed

California Proposition 65: Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 2-0-0

HMIS: 2-0-0

Initial preparation date: 12.16.2016

End of Safety Data Sheet