

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Copper AA Standard, 1000 ppm (1mL = 1mg Cu)
Product code : LC13400

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2 H315
Serious eye damage/eye irritation Category 2A H319
Hazardous to the aquatic environment - Acute Hazard Category 3 H402
Hazardous to the aquatic environment - Chronic Hazard Category 3 H412
Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H315 - Causes skin irritation
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects
Precautionary statements (GHS-US) : P264 - Wash exposed skin thoroughly after handling
P273 - Avoid release to the environment
P280 - Wear protective gloves, eye protection
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
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

2.4. Unknown acute toxicity (GHS US)

Not applicable

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SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Water	(CAS No) 7732-18-5	97.63	Not classified
Nitric Acid, 70% w/w	(CAS No) 7697-37-2	2	Ox. Liq. 3, H272 Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318
Copper (II) Nitrate, Hemipentahydrate	(CAS No) 19004-19-4	0.37	Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after skin contact : Causes skin irritation.
- Symptoms/injuries after eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Protective equipment : Safety glasses. Gloves.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene measures : Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong reducing agents. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper (II) Nitrate, Hemipentahydrate (19004-19-4)

Not applicable

Nitric Acid, 70% w/w (7697-37-2)

ACGIH	ACGIH TWA (ppm)	2 ppm (Nitric acid; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	ACGIH STEL (ppm)	4 ppm (Nitric acid; USA; Short time value; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m³)	5 mg/m³
OSHA	OSHA PEL (TWA) (ppm)	2 ppm
IDLH	US IDLH (ppm)	25 ppm
NIOSH	NIOSH REL (TWA) (mg/m³)	5 mg/m³
NIOSH	NIOSH REL (TWA) (ppm)	2 ppm
NIOSH	NIOSH REL (STEL) (mg/m³)	10 mg/m³
NIOSH	NIOSH REL (STEL) (ppm)	4 ppm

Water (7732-18-5)

Not applicable

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.

Personal protective equipment : Gloves. Safety glasses.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : Respiratory protection not required in normal conditions.

Other information : Do not eat, drink or smoke during use.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Blue
Odor	: None.
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1 g/ml
Solubility	: Miscible with water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong reducing agents. Strong bases.

10.6. Hazardous decomposition products

Nitrogen oxides. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	: Skin and eye contact
Acute toxicity	: Not classified

Copper (II) Nitrate, Hemipentahydrate (19004-19-4)

LD50 oral rat	940 mg/kg (Rat)
ATE US (oral)	940.000 mg/kg body weight

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Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

Copper (II) Nitrate, Hemipentahydrate (19004-19-4)	
EC50 other aquatic organisms 1	0.085 mg/l (336 h; Selenastrum capricornutum; Anhydrous form)
LC50 fish 2	0.25 mg/l (LC50; 96 h)
Nitric Acid, 70% w/w (7697-37-2)	
EC50 Daphnia 1	180 mg/l (EC50; 48 h)
LC50 fish 2	72 ppm (LC50; 96 h)
Threshold limit algae 1	> 19 mg/l (EC0)

12.2. Persistence and degradability

Copper AA Standard, 1000 ppm (1mL = 1mg Cu)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Copper (II) Nitrate, Hemipentahydrate (19004-19-4)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Nitric Acid, 70% w/w (7697-37-2)	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the components available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
Water (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Copper AA Standard, 1000 ppm (1mL = 1mg Cu)	
Bioaccumulative potential	Not established.

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Copper (II) Nitrate, Hemipentahydrate (19004-19-4)	
BCF fish 1	200 - 667 (BCF)
BCF other aquatic organisms 1	471 (BCF; 168 h; Daphnia magna)
BCF other aquatic organisms 2	2400 (BCF)
Bioaccumulative potential	Bioaccumable.
Nitric Acid, 70% w/w (7697-37-2)	
BCF fish 1	<= 1 (BCF)
Log Pow	-2.3 (OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method)
Bioaccumulative potential	Bioaccumulation: not applicable.
Water (7732-18-5)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming	: No known effects from this product.
GWPmix comment	: No known effects from this product.
Other information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Copper AA Standard, 1000 ppm (1mL = 1mg Cu)		
SARA Section 311/312 Hazard Classes		Immediate (acute) health hazard
All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:		
Copper (II) Nitrate, Hemipentahydrate	CAS No 19004-19-4	0.37%
Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
Nitric Acid, 70% w/w	CAS No 7697-37-2	2%
Nitric Acid, 70% w/w (7697-37-2)		
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb	
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard	

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15.2. International regulations

CANADA

Copper AA Standard, 1000 ppm (1mL = 1mg Cu)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Copper (II) Nitrate, Hemipentahydrate (19004-19-4)	
WHMIS Classification	Class C - Oxidizing Material Class D Division 2 Subdivision B - Toxic material causing other toxic effects
Nitric Acid, 70% w/w (7697-37-2)	
WHMIS Classification	Class E - Corrosive Material Class C - Oxidizing Material
Water (7732-18-5)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

Revision date : 05/02/2017

Other information : None.

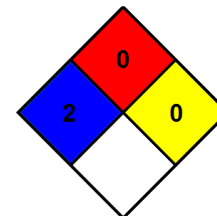
Full text of H-phrases: see section 16:

H272	May intensify fire; oxidizer
H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : A

A - Safety glasses

SDS US LabChem

Copper AA Standard, 1000 ppm (1mL = 1mg Cu)

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