SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Copper (Cupric) Nitrate 1.0 Molar, 1 Liter
CAS number	See Section 3
Synonyms	Copper dinitrate; Copper(II) nitrate; Cupric dinitrate

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

Identified uses	Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024).

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal Word — Danger!

Hazard statements — Strong oxidizer. Contact with other material may cause a fire. May cause allergic skin reaction. May be harmful if swallowed. May cause respiratory tract irritation. May cause severe eye and skin irritation with possible burns. May cause liver and kidney damage. Target Organs: Kidneys, liver.

Precautionary statements — Eye: Contact with eyes may cause severe irritation, and possible eye burns. Contact may cause ulceration of the conjunctiva and cornea.
Skin: May cause severe irritation and possible burns. May cause dermatitis. May cause skin discoloration.
Ingestion: May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns. May cause liver and kidney damage. May be harmful if swallowed.
Inhalation: May cause respiratory tract irritation. May cause ulceration and perforation of the nasal septum if inhaled in excessive quantities.
Chronic: Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause liver and kidney damage. Individuals with Wilson's disease are unable to metabolize copper. Thus, copper accumulates in various tissues and may result in liver, kidney, and brain damage.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

No information available.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Water	No information available	7732-18-5	81.2%
Cupric Nitrate	Copper dinitrate; Copper(II) nitrate; Cupric dinitrate	3251-23-8	18.8%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled — Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

In case of skin contact	Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
In case of eye contact	Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid imme diately.
If swallowed	If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively.
Antidote: The use of d-Penicillamine as a chelating agent should be determined by qualified medical personnel.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Use extinguishing media most appropriate for the surrounding fire.
Unsuitable extinguishing media	No information available.

5.2 Specific hazards arising from the substance or mixture

Strong oxidizer. Contact with other material may cause fire. Wear appropriate protective clothing to prevent contact with skin and eyes.

5.3 Special protective equipment and precautions for firefighters

Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

5.4 Further information

Flash Point	Not applicable.
Autoignition Temperature	Not applicable.

Explosion limits

Upper	Not available.
Lower	Not available.
Sensitivity to Mechanical Impact	Not available.
Sensitivity to Static Discharge	Not available.

NFPA

Health	Flammability	Instability	Physical hazards
3	3	1	OX

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use proper personal protective equipment as indicated in Section 8.

6.2 Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.

6.4 Reference to other sections

See Section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wash thoroughly after handling. Use with adequate ventilation. Keep away from heat, sparks and flame. Avoid contact with clothing and other combustible materials. Do not get on skin or in eyes. Do not ingest or inhale.

Hygiene measures

No information available.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep away from heat, sparks, and flame. Store in a cool, dry place. Store in a tightly closed container.

Incompatibilities

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

No information available.

US. ACGIH Threshold Limit Values

Component	Type	Value
Cupric nitrate	TWA	1 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Cupric nitrate	IDLH TWA	100 mg/m3 REL = 1 mg/m3

Biological occupational exposure limits

No information available.

8.2 Exposure controls

Appropriate engineering controls

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Blue-green
Odor	None reported.
Odor Threshold	Not available.

pH	Not available.
Melting Point/Range	Not available.
Boiling Point/Range	Not available.
Evaporation Rate	Not available.
Flammability (solid)	Not available.
Flammability or explosive limit	
Upper	Not available.
Lower	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Density	Not available.
Solubility	Soluble in water.
Partition coefficient; n-octanol/water	Not available.
Autoignition Temp	Not available.
Decomposition Temp	Not available.
Viscosity	Not available.
Molecular Formula	Cu(NO3)2
Molecular Weight	187.56
VOC Content(%)	Not available.
Oxidizing properties	Not available.

9.2 Other safety information Not available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous Polymerization: Has not been reported.

10.4 Conditions to avoid

Incompatible materials, organic matter.

10.5 Incompatible materials

Combustible materials, potassium ferrocyanide, ether, tin. Dried material ignites paper spontaneously in the presence of moisture.

10.6 Hazardous decomposition products

Oxides of nitrogen.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Water	Rat: LD50 = >90 mL/kg	Not listed	Not listed
Cupric Nitrate	Mouse: LD50 = 430 mg/kg Rat: LD50 = 794 mg/kg Oral, rat: LD50 = 940 mg/kg	Draize test, rabbit, eye: 100 mg Severe; Draize test, rabbit, skin: 500 mg Severe	Not listed

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Water	7732-18-5	Not listed	Not listed	Not listed	Not listed	Not listed
Cupric Nitrate	3251-23-8	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

No information available.

Reproductive toxicity

No information available.

Chronic effects
No information available.

11.2 Additional Information
No information available.

SECTION 12: Ecological information

12.1 Toxicity
No information available.

12.2 Persistence and degradability
No information available.

12.3 Bio accumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available.

12.7 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)	Not regulated as a hazardous material
IMDG	Not regulated as a hazardous material
IATA	Not regulated as a hazardous material

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

CAS# 7732-18-5 is listed on the TSCA inventory.
CAS# 3251-23-8 is listed on the TSCA inventory.
None of the chemicals are listed under TSCA Section 12b.
None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substance List (40 CFR 302.4)

CAS# 3251-23-8: 100 lb final RQ; 45.4 kg final RQ.

SARA 304 Emergency release notification

No information available.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

None of the chemicals in this product are considered highly hazardous by OSHA.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

None of the chemicals in this product have a TPQ.

SARA 311/312 Hazardous

CAS # 3251-23-8: immediate, delayed, fire.

SARA 313 (TRI reporting)

This material contains Cupric nitrate (listed as Water Dissociable Nitrate Compounds), 18.8%, (CAS# 3251-23-8) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

No information available.

Safe Drinking Water Act

CAS# 3251-23-8 is listed as a Hazardous Substance under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

No information available.

US state regulations

US. Massachusetts RTK - Substance List

CAS# 3251-23-8 can be found on the state right to know list.

US. New Jersey Worker and Community Right-to-Know Act

CAS# 3251-23-8 can be found on the state right to know list.

US. Pennsylvania Worker and Community Right-to-Know Law

CAS# 3251-23-8 can be found on the state right to know list.

California Proposition 65

California No Significant Risk Level: None of the chemicals in this product are listed.

SECTION 16: Other information

Date of Issue: 11/14/2005
Revision Date: 7/31/2026

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.