

# SAFETY DATA SHEET

## COPPER NITRATE SOLUTION

### Section 1 – Identification

Product Copper Nitrate Solution (6-0-0 + 14% Cu)  
Manufacturer TradeMark Nitrogen Corp.  
Address 1216 Old Hopewell Road, Tampa, FL 33619  
Phone (813) 626-1181  
24 Hour Emergency Contact Chemtrec (800) 424-9300

Recommended Use:  
Used as a source of copper and nitrogen in various fertilizer solutions and in other manufacturing processes.

### Section 2 – Hazard Identification



**Corrosive**

**Danger:** Causes severe skin burns and eye damage.  
Wear protective clothing.  
Wash thoroughly after handling.



**Environmental Hazard**

**Warning:** Very toxic to aquatic life.  
Avoid release to the environment.  
Clean spills immediately.



**Respiratory Irritation**

**Warning:** May cause respiratory irritation.  
Avoid breathing vapors.  
Use only in a well ventilated area.



**Health Hazard**

**Warning:** May cause danger to organs through prolonged or repeated exposure.

### Section 3 – Composition

Ingredients	Component	CAS. No.	Percent by Weight
	Copper Nitrate (Cu(NO <sub>3</sub> ) <sub>2</sub> )	3251-23-8	41.3%
	Nitric Acid (HNO <sub>3</sub> )	7697-37-2	<1.0%
	Water (H <sub>2</sub> O)	7732-18-5	Balance

### Section 4 – First Aid Measures

Inhalation	If inhaled: Remove person to fresh air and keep comfortable for breathing. Provide artificial respiration if necessary. Seek medical attention if necessary.
Skin Contact	If on skin (or hair): Take off all contaminated clothing. Rinse skin with soap and water for at least 15 minutes.
Eye Contact	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Seek medical attention if irritation persists.
Ingestion	If swallowed: <b>Do NOT induce vomiting.</b> Drink large amounts of water. Never give anything by mouth to an unconscious person. Seek medical attention.
Acute Health Hazards	Highly corrosive. May cause severe skin burns and eye damage.
Chronic Health Hazards	May cause damage to soft tissue with repeated exposure.

### Section 5 – Fire Fighting Measures

Suitable Extinguishing Techniques & Equipment	This product is an aqueous solution. It is non-flammable and presents no fire hazard.
Chemical hazards From Fire	In a fire, copper and nitrogen oxides and ammonia may be present. Keep material wet to prevent nitrate salts from forming as they can support combustion or become unstable.



#### TradeMark Nitrogen Corp.

1216 Old Hopewell Road  
Tampa, Florida 33619 USA  
www.trademarknitrogen.com  
800 452 3107  
813 626 1181

## Section 5 – Fire Fighting Measures Continued

Special Fire Fighting Procedures Use extinguishing agent most appropriate to surrounding materials.

NFPA Rating Health - 2 (Moderate), Fire - 0 (Least), Reactivity - 1 (Slight)



## Section 6 – Accidental Release Measure

Personal Precautions Avoid splashing. Prevent exposure to spilled material with the use of proper PPE.

Protective Equipment PPE should include gloves, goggles or safety glasses and level C protective suit.

Containment Control the flow of product using dikes of soil, sand bags or other commercially available inert sorbent socks or booms.

In Case of Spill Absorb product with inert absorbent. Avoid splashing or spraying. Contain and pick up spill in diked area. Prevent discharge to sewers or water ways. If uncontaminated, recover and re-use.

## Section 7 – Safe Handling and Storage

Precautions for Safe Handling and Storage Store in a well ventilated dry place.

Incompatibility Avoid contact with readily oxidizable materials, alkaline substances and reducing agents.

## Section 8 – Exposure Controls / Personal Protection

Exposure Limits	Component	Permissible Exposure Limit	Threshold Limit Value	Short Term Exposure Limit	Immediately Dangerous to Life or Health
	Copper Nitrate (Cu(NO <sub>3</sub> ) <sub>2</sub> )	1mg/m <sup>3</sup> (as Copper mist or dust)	1mg/m <sup>3</sup> (as Copper mist or dust)	4mg/m <sup>3</sup> (as Copper mist or dust)	Not Established
	Nitric Acid (HNO <sub>3</sub> )	2 ppm	2 ppm (TWA)	4ppm	25ppm
	Water (H <sub>2</sub> O)	Not Established	Not Established	Not Established	Not Established

Engineering Controls Local or general exhaust. Eyewash facilities should be available.  
 Eyes - Chemical safety goggles or safety glasses.  
 Hands - Impervious gloves.  
 Respiratory - None required under normal conditions. NIOSH approved respirator if there is a mist of the product.

Personal Protective Equipment



Gloves



Goggles

or



Safety Glasses

## Section 9 – Physical and Chemical Properties

Appearance and Odor	Clear blue liquid.		
Boiling Point	> 212°F (> 100°C) at 1 atmosphere	Specific Gravity	1.52 at 64°F (17.8°C)
Salt Out Temp	<2.0°F (-16.7°C)	Molecular Weight	187.56
Vapor Pressure	N/A	Water Reactive	N/A
Solubility In Water	Soluble in water	Evaporative Rate	N/A
Density	12.65 lbs/gal at 64°F (1.52 kg/L at 17.8°C)	pH	< 0.5
Gallons per Ton	158.1 gal/ton (0.60 L/Kg)	Freezing Point	< 15°F (-9.4°C)
Flash Point	N/A	Auto Ignition Temp	N/A
		Flammability Limits	N/A LEL N/A UEL N/A



### TradeMark Nitrogen Corp.

1216 Old Hopewell Road  
 Tampa, Florida 33619 USA  
[www.trademarknitrogen.com](http://www.trademarknitrogen.com)  
 800 452 3107  
 813 626 1181

## Section 10 – Stability and Reactivity

Reactivity	Product is not reactive under normal conditions.
Stability	Product is stable under normal conditions.
Hazardous Reactions	Hazardous polymerization will not occur.
Conditions to Avoid	Do not allow product to mix with strong bases.
Incompatible Materials	Avoid contact with readily oxidizable materials, alkaline substances and reducing agents.
Hazardous Decomposition Products	Extreme heat may cause decomposing to toxic fumes of nitrogen oxides. Hazardous polymerization will not occur.

## Section 11 – Toxicology Information

Routes of Exposure	Inhalation, ingestion or skin/eye absorption
Symptoms and Signs of Exposure	<b>Eyes &amp; Skin</b> serious damage may result. <b>Inhalation</b> of mist may cause damage to the respiratory tract. <b>Ingestion</b> can cause abdominal pain from damage to the digestive tract.
Long Term Effects	May cause damage to organs through prolonged or repeated exposure.
Toxicity	No limits have been set for this material.
Carcinogen	The International Agency for Research on Cancer has not classified copper nitrate for its carcinogenic potential (IARC 1987).

## Section 12 – Ecological Information

Water	Even at low concentrations it may be toxic to fish or other aquatic organisms.
-------	--

## Section 13 – Disposal Considerations

Waste	Disposal must be done in accordance with local, state and federal environmental regulations. Place waste in an appropriate container with correct labeling. EPA waste number: D002 (Corrosivity).
-------	---

## Section 14 – Transport Information

This material is hazardous as defined by 49 CFR 172.101 by the US Department of Transportation

UN ID Number	UN 3264
Proper Shipping Name	Corrosive Liquid, acidic, inorganic, N.O.S. (Copper Nitrate)
Hazard Class	8
Packing Group	PG III
US DOT Label	8
Marine Pollutant	Dangerous to aquatic life in any concentration.
Authorized Packaging	Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HD2 and 31HH2).
Emergency Response Guide Number	154



This material is hazardous as defined by the IMDG Code

UN ID Number	UN 3264
Proper Shipping Name	Corrosive Liquid, acidic, inorganic, N.O.S. (Copper Nitrate)
Hazard Class	8
Packing Group	PG III
Label	8
Marine Pollutant	Dangerous to aquatic life in any concentration.
Authorized Packaging	Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HD2 and 31HH2).
EmS	F-A, S-B



### TradeMark Nitrogen Corp.

1216 Old Hopewell Road  
Tampa, Florida 33619 USA  
www.trademarknitrogen.com  
800 452 3107  
813 626 1181

## Section 15 – Regulatory Information

### United States - SARA Hazard Category

This product has been reviewed according to the EPA Hazard Categories promulgated under Sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act (SARA) and is considered, under applicable definitions, to meet the following categories:

Fire - No                      Pressure - No                      Acute - Yes                      Chronic - Yes

### SARA Title III Information

This product contains the following substances subject to the reporting requirements of Title III (EPCRA) of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

Chemical	CAS No.	CERCLA RQ	SARA Reporting		
			302	311/312	313
Copper Nitrate	3251-25-8	100 lbs (45.4 kg)	Yes	Yes	Yes <sup>(1)</sup>

<sup>(1)</sup> As copper compounds

### CERCLA / Superfund, 40 CFR Part 117, 302

If this product contains components subject to substances designated as CERCLA reportable Quantity (RQ) Substances, it will be designated in the above table with the RQ value in pounds. If there is a release of RQ Substance to the environment, notification to the National Response Center, Washington DC (800-424-8802) is required.

### TSCA

Copper Nitrate Solution (Nitric Acid, Copper(2+) salt (2:1)) is on the TSCA inventory list.

## Section 16 – Other Information

### Date of Revision

April 2015 original version prepared in accordance with 29 CFR 1910.1200 Appendix D to meet Global Harmonization Standards.

### Disclaimer

The information contained in this SDS refers only to the specific material designated and does not relate to any process or use with any other materials. This information is furnished free of charge and is based on data believed to be accurate and reliable as of the date hereof. It is intended for use by persons possessing technical knowledge at their own discretion and risk. Since actual use is beyond our control, no warranty, expressed or implied, and no liability is assumed by TradeMark Nitrogen Corp. in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents. TradeMark Nitrogen Corp. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.



### TradeMark Nitrogen Corp.

1216 Old Hopewell Road  
Tampa, Florida 33619 USA  
www.trademarknitrogen.com  
800 452 3107  
813 626 1181