

## SAFETY DATA SHEET

Creation Date 12-June-2014

Revision Date 23-January-2018

Revision Number 4

### 1. Identification

**Product Name** Copper(II) nitrate, 2.5-hydrate, reagent ACS

**Cat No. :** AC405850000; AC405850025; AC405850050; AC405851000;  
AC405855000

**CAS-No** 19004-19-4  
**Synonyms** Cupric nitrate

**Recommended Use** Laboratory chemicals.  
**Uses advised against** Not for food, drug, pesticide or biocidal product use

#### Details of the supplier of the safety data sheet

##### Company

**Importer/Distributor**  
Fisher Scientific  
112 Colonnade Road,  
Ottawa, ON K2E 7L6,  
Canada  
Tel: 1-800-234-7437

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Manufacturer**  
Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

#### **Emergency Telephone Number**

For information **US** call: 001-800-ACROS-01 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

### 2. Hazard(s) identification

#### Classification

**WHMIS 2015 Classification** Classified as hazardous under the Hazardous Products Regulations (SOR/2015-17)

<b>Acute oral toxicity</b>	Category 4
<b>Skin Corrosion/Irritation</b>	Category 1 B
<b>Serious Eye Damage/Eye Irritation</b>	Category 1
<b>Specific target organ toxicity (single exposure)</b>	Category 3

Target Organs - Respiratory system.

#### Label Elements

**Signal Word**  
Danger

**Hazard Statements**  
Harmful if swallowed  
Causes severe skin burns and eye damage  
May cause respiratory irritation

**Precautionary Statements****Prevention**

Do not breathe dust/fumes/gas/mist/vapours/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Use only outdoors or in a well-ventilated area  
 Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a POISON CENTER/doctor  
 Rinse mouth  
 Do NOT induce vomiting  
 Wash contaminated clothing before reuse

**Storage**

Store locked up  
 Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Other Hazards**

Very toxic to aquatic life with long lasting effects

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Nitric acid, copper(2+) salt, hydrate	19004-19-4	>95
Cupric nitrate	3251-23-8	-

### 4. First-aid measures

<b>General Advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required. Keep eye wide open while rinsing.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician immediately.
<b>Inhalation</b>	Move to fresh air. If not breathing, give artificial respiration. Call a physician or Poison Control Center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
<b>Ingestion</b>	Immediate medical attention is required. Do not induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
<b>Most important symptoms/effects</b>	Causes burns by all exposure routes. Product is a corrosive material. Use of gastric

lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation  
Treat symptomatically

**Notes to Physician**

### 5. Fire-fighting measures

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** No information available  
**Method -** No information available

**Autoignition Temperature****Explosion Limits**

**Upper** No data available  
**Lower** No data available  
**Sensitivity to Mechanical Impact** No information available  
**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

The product causes burns of eyes, skin and mucous membranes. Do not allow run-off from fire fighting to enter drains or water courses.

**Hazardous Combustion Products**

Nitrogen oxides (NO<sub>x</sub>) Copper oxides

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

<b>Health</b>	<b>Flammability</b>	<b>Instability</b>	<b>Physical hazards</b>
3	1	1	N/A

### 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. Evacuate personnel to safe areas. Avoid contact with skin, eyes and clothing.

**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.

**Methods for Containment and Clean Up** Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

### 7. Handling and storage

**Handling** Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest.

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.

### 8. Exposure controls / personal protection

**Exposure Guidelines**

Component	Alberta	British Columbia	Ontario TWAEV	Quebec	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nitric acid, copper(2+) salt, hydrate					TWA: 1 mg/m <sup>3</sup>		IDLH: 100 mg/m <sup>3</sup>

Cupric nitrate					TWA: 1 mg/m <sup>3</sup>		TWA: 1 mg/m <sup>3</sup> IDLH: 100 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
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**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures**

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.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment****Eye Protection**

Goggles

**Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	Glove comments
Natural rubber	See manufacturers	-	Splash protection only
Nitrile rubber	recommendations		
Neoprene			
PVC			

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

**Respiratory Protection**

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. 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.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

**Recommended Filter type:** Particulates filter conforming to EN 143

When RPE is used a face piece Fit Test should be conducted

**Environmental exposure controls**

Prevent product from entering drains. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Powder Solid
<b>Appearance</b>	Blue
<b>Odor</b>	Odorless
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting Point/Range</b>	114 °C / 237.2 °F
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	

Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	No information available
Solubility	soluble
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Cu N2 O6 . 2.5 H2 O
Molecular Weight	232.6

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions. Moisture sensitive.
<b>Conditions to Avoid</b>	Avoid dust formation. Incompatible products. Excess heat. Exposure to moisture.
<b>Incompatible Materials</b>	Strong oxidizing agents, Strong reducing agents, Ammonia, Cyanides, Acid anhydrides, Combustible material
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NOx), Copper oxides
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cupric nitrate	-	Not listed	Not listed

**Toxicologically Synergistic Products** No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Irritation</b>	Causes burns by all exposure routes
<b>Sensitization</b>	No information available
<b>Carcinogenicity</b>	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Nitric acid, copper(2+) salt, hydrate	19004-19-4	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

IARC: (International Agency for Research on Cancer)

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

<b>Mutagenic Effects</b>	No information available
<b>Reproductive Effects</b>	No information available.
<b>Developmental Effects</b>	No information available.

<b>Teratogenicity</b>	No information available.
<b>STOT - single exposure</b>	Respiratory system
<b>STOT - repeated exposure</b>	None known
<b>Aspiration hazard</b>	No information available
<b>Symptoms / effects, both acute and delayed</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Cupric nitrate	Not listed	LC50: 0.29 mg/l/96 H	Not listed	EC50: 0.026 mg/l/48H (M=10)

**Persistence and Degradability** based on information available. May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
<b>Proper technical name</b>	Nitric acid, copper(2+) salt, hydrate
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

### TDG

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

### IATA

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

### IMDG/IMO

<b>UN-No</b>	UN3260
<b>Proper Shipping Name</b>	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
<b>Hazard Class</b>	8
<b>Packing Group</b>	II

## 15. Regulatory information

All of the components in the product are on the following Inventory lists: X = listed

### International Inventories

Component	DSL	NDSL	TSCA	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	IECSC	KECL
Nitric acid, copper(2+) salt, hydrate	-	-	-	-	-		X	-	X	-	-
Cupric nitrate	X	-	X	221-838-5	-		X	X	X	X	X

### Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and meets the requirements of the HPR (Paragraph 13(1)(a) of the Hazardous Products Act (HPA)).

## 16. Other information

<b>Prepared By</b>	Regulatory Affairs Thermo Fisher Scientific Email: EMSDS.RA@thermofisher.com
<b>Creation Date</b>	12-June-2014
<b>Revision Date</b>	23-January-2018
<b>Print Date</b>	23-January-2018
<b>Revision Summary</b>	This document has been updated to comply with the requirements of WHMIS 2015 to align with the Globally Harmonised System (GHS) for the Classification and Labelling of Chemicals.

### Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text

**End of SDS**