

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : CHE-PLEX COPPER 5%

1.2. Recommended use and restrictions on use

1.3. Supplier

INNICTIS® BIOSCIENCE
 PLANT HEALTH TECHNOLOGIES
 P.O. Box 9296
 Boise ID 83707, - USA
 T 855-466-8428

1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral), Category 4	H302 Harmful if swallowed.
Skin corrosion/irritation, Category 2	H315 Causes skin irritation.
Serious eye damage/eye irritation, Category 2A	H319 Causes serious eye irritation.
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335 May cause respiratory irritation.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Warning

Hazard statements (GHS US) :

H302 - Harmful if swallowed.
 H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.
 H335 - May cause respiratory irritation.

Precautionary statements (GHS US) :

P261 - Avoid breathing fume, mist, spray.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P271 - Use only outdoors or in a well-ventilated area.
 P280 - Wear protective gloves, eye protection, face protection.
 P301+P312 - If swallowed: Call a poison center/doctor/... if you feel unwell
 P302+P352 - If on skin: Wash with plenty of water/...
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P312 - Call poison control center or doctor for treatment advice if you feel unwell
 P321 - Specific treatment (see supplemental first aid instruction on this label)
 P330 - Rinse mouth.
 P332+P313 - If skin irritation occurs: Get medical attention
 P337+P313 - If eye irritation persists: Get medical attention
 P362 - Take off contaminated clothing.
 P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
 P405 - Store locked up.
 P501 - Dispose of contents/container to ... in accordance with Federal, state, and local regulations

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2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Copper diammonium citrate complex			Not classified
Diammonium salt of Copper Ethylenediaminetetraacetic acid	(CAS-No.) 67989-88-2		Not classified
sulfur	(CAS-No.) 7704-34-9		Skin Irrit. 2, H315 Eye Irrit. 2B, H320
Anhydrous Ammonia	(CAS-No.) 7664-41-7		Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1A, H314 Aquatic Acute 1, H400

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 affected person to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

- Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
- Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) 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. Specific hazards arising from the chemical

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the 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

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.

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Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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 vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CHE-PLEX COPPER 5%	
No additional information available	
Diammonium salt of Copper Ethylenediaminetetraacetic acid (67989-88-2)	
No additional information available	
sulfur (7704-34-9)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (mg/m ³)	3 mg/m ³
Anhydrous Ammonia (7664-41-7)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	25 ppm
ACGIH STEL (ppm)	25 ppm
Copper diammonium citrate complex	
No additional information available	

8.2. Appropriate engineering controls

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask

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Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear blue liquid.
Colour	: Blue
Odour	: Slight ammonia odor
Odour threshold	: No data available
pH	: 7.5 – 8.5
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Density	: 10.25 lbs/gallon
Solubility	: Soluble.
Partition coefficient n-octanol/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
Explosive limits	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Contact with strong oxidizers may result in a fire and explosion hazard.

10.2. Chemical stability

Product is stable at ambient temperature and pressure, under normal storage and handling conditions. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Extremely high temperatures. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Oxidizers. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Thermal decomposition may include ammonia and toxic and hazardous oxides of zinc and nitrogen. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

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Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

CHE-PLEX COPPER 5%	
LD50 oral rat	742 mg/kg
ATE US (oral)	742 mg/kg bodyweight

sulfur (7704-34-9)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	> 9.23 mg/l/4h (Rat)

Anhydrous Ammonia (7664-41-7)	
LD50 oral rat	350 mg/kg

Skin corrosion/irritation : Causes skin irritation.
pH: 7.5 – 8.5

Serious eye damage/irritation : Causes serious eye irritation.
pH: 7.5 – 8.5

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

sulfur (7704-34-9)	
LC50 fish 1	866 mg/l (96 h; Brachydanio rerio)
LC50 fish 2	> 100 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
TLM fish 1	10000 ppm (96 h; Gambusia affinis)
Threshold limit other aquatic organisms 1	> 10000 mg/l (24 h; Daphnia magna)

Anhydrous Ammonia (7664-41-7)	
LC50 fish 1	0.75 – 3.4 mg/l (96 h; Pimephales promelas; Ammonium ions)
LC50 other aquatic organisms 1	1 – 10 mg/l (96 h)
LC50 fish 2	0.52 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
TLM fish 1	0.2 - 5, Pisces; Nocivity test
Threshold limit other aquatic organisms 1	1 - 10, 96 h

12.2. Persistence and degradability

CHE-PLEX COPPER 5%	
Persistence and degradability	Not established.

Diammonium salt of Copper Ethylenediaminetetraacetic acid (67989-88-2)	
Persistence and degradability	Not established.

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sulfur (7704-34-9)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable. Adsorbs into the soil. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable
Anhydrous Ammonia (7664-41-7)	
Persistence and degradability	Readily biodegradable in water. Ozonation in water. Biodegradable in the soil. No (test) data on mobility of the components available. Ozonation in the air. Not established.
Copper diammonium citrate complex	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

CHE-PLEX COPPER 5%	
Bioaccumulative potential	Not established.
Diammonium salt of Copper Ethylenediaminetetraacetic acid (67989-88-2)	
Bioaccumulative potential	Not established.
sulfur (7704-34-9)	
Partition coefficient n-octanol/water (Log Pow)	0.23 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4). Not established.
Anhydrous Ammonia (7664-41-7)	
Partition coefficient n-octanol/water (Log Pow)	-1.14
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.
Copper diammonium citrate complex	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

sulfur (7704-34-9)	
Ecology - soil	Not toxic to bees.

12.5. Other adverse effects

Other information : Avoid unintentional release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid unintentional release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea

Air transport

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SECTION 15: Regulatory information

15.1. US Federal regulations

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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:

Diammonium salt of Copper Ethylenediaminetetraacetic acid	CAS-No. 67989-88-2	%
Copper diammonium citrate complex	CAS-No.	%

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.

Anhydrous Ammonia	CAS-No. 7664-41-7	%
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Anhydrous Ammonia (7664-41-7)

CERCLA RQ	See ammonium hydroxide
RQ (Reportable quantity, section 304 of EPA's List of Lists)	100 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb

15.2. International regulations

CANADA

sulfur (7704-34-9)

Listed on the Canadian DSL (Domestic Substances List)

Anhydrous Ammonia (7664-41-7)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

Component	State or local regulations
sulfur(7704-34-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Anhydrous Ammonia(7664-41-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-statements:

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H320	Causes eye irritation
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.

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SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.