



SAFETY DATA SHEET

This SDS complies with REACH 1907/2006 and 2001/58/EC, GHS REVISION 5, OSHA 29CFR 1910.1200

Section 1: Chemical Product and Company Identification

MANUFACTURER'S NAME

HydroGro
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EMERGENCY TELEPHONE

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Safety Data Sheet Competent Person: Customer Service

DATE PREPARED: December 19, 2016

REVISION DATE: December 19, 2016

PRODUCT NAME: **AgroFuze Copper (Cu)**

FORMULA: Preparation/Mixture

PRODUCT USE: Supplement for professionally maintained golf courses, sport turf, lawn and landscaping

Section 2: Hazards Identification

GHS Hazard Class

Physical Hazards: None

Health Hazards: Acute toxicity, Oral Category 4
Acute aquatic toxicity Category 1
Chronic aquatic toxicity Category 1

Label elements:



Signal word: Warning
Hazard Statement: H302: Harmful if swallowed
H410: Very toxic to aquatic life with long lasting effects

Precautionary Statements:

Prevention	P264: Wash exposed skin thoroughly after handling P270: Do not eat, drink or smoke when using this product P273: Avoid release to the environment
Response	P301+P312: IF SWALLOWED: Call a poison center / doctor if you feel unwell P330: Rinse mouth. P391: Collect spillage
Storage	P405: Store locked up
Disposal	P501: Dispose of contents/container in accordance with the waste disposal requirements of your country, state, or local authorities.

Hazards not otherwise classified (HNOC) or not covered by GHS - None

HAZARD CLASSIFICATION: DOT: Hazardous, IMDG & IATA: Not applicable

FIRE AND EXPLOSION: Not Considered flammable or combustible.

POTENTIAL HEALTH EFFECTS: <1 % of mixture consists of ingredients of unknown acute toxicity

APPEARANCE: Brown concentrate



Component	Health (Blue)	Flammability (Red)	Reactivity (Yellow)	Special (White)
AgroFuze Cu	1	0	0	----

Section 3: Composition, Information on Ingredients

PRODUCT COMPOSITION	APPROX %	CAS NO.	EC NUMBER	CANADA DSL
Copper Oxichloride	<60	1332-40-7	none	N
Water	< 40	7732-18-5	231-791-2	Y

Some items on this SDS may be designated as trade secrets (TS). Bonafide requests for disclosure of trade secret information to medical personnel must be made in accordance with the provisions contained in 29 CFR 1910.1200 I 1-13.

Section 4: First Aid Measures

Description of First Aid Measures

Inhalation	If inhaled, remove to fresh air. Get medical attention immediately. Keep patient warm. Seek immediate medical advice
Skin Contact	Wash with soap and water. Seek immediate medical advice
Eye Contact	Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open check for and remove any contact lenses. Then consult a doctor
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Seek medical treatment

Most important symptoms and effects, both acute and delayed

Symptoms/Injuries after Inhalation	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Symptoms/Injuries after Skin Contact	Causes skin irritation
Symptoms/Injuries after Eye Contact	Causes serious eye irritation
Symptoms/Injuries after Ingestion	Drink lots of water. Call doctor immediately.

Indication of any immediate medical attention and special treatment needed

No further relevant information available

General Information

Take off all contaminated clothing immediately. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

Section 5: Fire-fighting Measures

Suitable extinguishing media	Product is not flammable. Use firefighting measures that suit the surrounding fire.
Unsuitable extinguishing media	None
Special hazards arising from the substance or mixture	If this product is involved in a fire, the following can be released: carbon monoxide, carbon dioxide, and calcium oxide
Protective actions fire-fighters	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Firefighting equipment/instructions	Self-contained breathing apparatus and full protective clothing must be worn in case of fire
Specific Methods	Use standard firefighting procedures and consider the hazards of the other involved materials.



General fire hazards

Nonflammable

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Methods and materials for containment and cleaning up Dispose of contaminated material as waste according to section 13

Environmental precautions Do not allow product to reach sewage system or any water course.

Section 7: Handling and Storage

Precautions for safe handling Put on appropriate personal protective equipment (see section 8) Do not get in eyes or on skin or clothing. Do not ingest. Keep in the original container or an approved alternative made from a compatible material, keep tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Conditions for safe storage, including any incompatibilities Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool well ventilated area, away from incompatible materials (see section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use.

Specific uses This product is intended to be used for foliar applications.

Section 8: Exposure Controls/Personal Protection

Occupational exposure limits

PRODUCT	COMPOSITION	ACCGIH TLV	OSHA PEL	NIOSH REL
	Copper Oxichloride			1 mg/m ³ TWA

Biological limit values No biological exposure limits noted for the ingredients.

Appropriate engineering controls If user operations generate dust, fumes, gas vapor, or miss use process enclosures local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection members, such as personal protective equipment

Eye/face protection Safety eyewear complying with an improved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dust. Recommended: Tightly-fitting goggles

Skin protection
Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier
Other Wear perfect chemical resistant clothing

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations:



The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment.

Section 9: Physical and Chemical Properties

	PRODUCT CRITERIA
APPEARANCE - COLOR:	Blue Green
PHYSICAL STATE:	Suspension
ODOR:	Slight Odor
ODOR THRESHOLD	No data available
pH	
MELTING POINT/FREEZING POINT:	No data available
INITIAL BOILING POINT AND BOILING RANGE:	> 100°C
FLASH POINT:	No data available
EVAPORATION RATE:	No data available
FLAMMABILITY (Solid, gas)	Not flammable
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS	Not Measured
VAPOR PRESSURE	No data available
VAPOR DENSITY (AIR = 1)	No data available
RELATIVE DENSITY (@25°C):	1.60
SOLUBILITY(IES)	Soluble in water
OXIDIZING PROPERTIES	No data available
PARTITION COEFFICIENT: n-octanol/water	No data available
AUTO IGNITION TEMPERATURE	No data available
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY	No data available

Section 10: Stability and Reactivity

Reactivity:	No information known
Chemical Stability:	Stable under recommended conditions.
Possibility of Hazardous Reactions:	Reacts violently with strong oxidizing agents
Conditions to Avoid:	No further relevant information available
Incompatibility (Materials to avoid):	Oxidizing agents
Hazardous decomposition products:	Acetic Acid fumes

Section 11: Toxicological Information

Information on likely routes of exposure:

Inhalation	May cause irritation to the respiratory system.
Skin Contact	Causes skin irritation
Eye Contact	Causes serious eye irritation
Ingestion	Do not swallow
Symptoms related to the physical, chemical and toxicological characteristics	May cause respiratory irritation.

Information on toxicological effects

Acute Toxicity

Product / Ingredient name	Toxicity Criteria	Toxicity Information
None		



Skin corrosion/irritation	May cause skin irritation
Serious eye damage/eye irritation	May cause serious eye irritation
Respiratory or skin sensitization	
Respiratory sensitization	Not determined
Skin sensitization	This product is not expected to cause skin sensitization
Germ cell mutagenicity	The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance
Carcinogenicity	No classification data on carcinogenic properties of this material is available from the EPA, IARC, ACGIH, NTP, or OSHA
OSHA specifically regulated substances (29 CSR 1910.1001 –1050)	Not listed
US national toxicology program (NTP) report on carcinogens	Not available
Reproductive toxicity	No effects known
Specific organ toxicity- single exposure	No known significant effects or critical hazards
Specific target organ toxicity repeated exposure	Not classified
Aspiration hazard	No effects known

Section 12: Ecological Information Persistence and degradability: No information is available

Toxicity

Chemical Constituent	Result	Species	Exposure
Copper Oxichloride	EC50	Daphnia magna (water flea)	0.5mg/L 48 Hr

Aquatic Toxicity	No further relevant information available
Persistence and degradability	No further relevant information available
Bioaccumulative potential:	No further relevant information available.
Mobility in soil:	No further relevant information available
PBT and vPvB assessment:	PBT/vPvB assessment not available as chemical assessment not required/not conducted
Other adverse effects:	No information is available.

Section 13: Disposal Considerations

Waste from residues/unused products: Follow the waste disposal requirements of your country, state, or local authorities

Contaminated packaging:



Contaminated packaging material should be disposed of as stated above for residues and unused product.

Rinsate:

Do not dispose of rinse water containing product in a sanitary sewer system or storm water drainage system.

Section 14: Transport Information

DOT

UN Number	3077
UN proper shipping name	Environmentally Hazardous substance, solid
Transportation hazard class	
Class	9
Subsidiary risk	N/A
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling
ERG number	N/A
DOR information on packaging may be different from that listed	

DOT

Section 15: Regulatory Information

US Federal Regulations

TOXIC SUBSTANCE CONTROL ACT (TSCA) STATUS:

This product is in compliance with rules, regulations, and orders of TSCA. All components are either listed on the TSCA inventory or are considered exempt.

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III SECTION 313 SUPPLIER NOTIFICATION:

This regulation requires submission of annual reports of toxic chemical(s) that appear in section 313 of the Emergency Planning and Community Right To Know Act of 1986 and 40 CFR 372. This information must be included in all SDS's that are copied and distributed for the material.

The Section 313 toxic chemicals contained in this product are: Copper chloride, mixture with copper oxide CAS 1332-40-7

Hazards categories:

Immediate Hazard	-No
Delayed Hazard	- No
Fire Hazard	- No
Pressure Hazard	- No
Reactivity Hazard	- No

SARA 302 Extremely hazardous substance

Not listed

SARA 311/312 Hazardous chemical

Not listed

SARA 313 (TRI Reporting)

Copper chloride, mixture with copper oxide CAS 1332-40-7

CALIFORNIA PROPOSITION 65:

This regulation requires a warning for California Proposition 65 chemical(s) under the statute.

The California proposition 65 chemical(s) contained in this product are: substance not listed

STATE RIGHT-TO-KNOW TOXIC SUBSTANCE OR HAZARDOUS SUBSTANCE LIST:

Massachusetts's hazardous substance(s):	None
Pennsylvania	Copper chloride, mixture with copper oxide CAS 1332-40-7
New Jersey	Copper chloride, mixture with copper oxide CAS 1332-40-7

CANADA:

WHMIS-2015: This SDS is in compliance with WHMIS 2015 (HPR / new HPA).

EUROPEAN UNION:

This product has been reviewed for compliance with the following European Community Directives: REACH 1907/2006; Regulation (EC) No 1272/2008 on classification, labeling, and packaging (CLP) of substances and mixtures.



Section 16: Other Information

Initial issue date:	December 19, 2016
Final revision date:	December 19, 2016
Revision Number:	0
Revision explanation	Initial version
Information Sources:	RTECS, ECHA, REACH, OSHA 29CFR 1910.1200

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