

## SAFETY DATA SHEET

Preparation Date March 20, 2020

Revision Date NA

### 1. Identification of the Substance/Preparation and of the Company

#### Product identifier

Product Description:	VodaGuard C Algaecide
Synonyms	coated copper sulfate pentahydrate
US EPA Registration number	95535-1

#### Recommended use of the chemical and restrictions on use

Recommended use	Algaecide
Uses advised against	Use contrary to label directions

#### Supplier of this Safety Data Sheet

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### 2. HAZARDS IDENTIFICATION

#### Classification

#### OSHA Regulatory Status

(OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity oral	Category 2
Acute toxicity - Dermal	Category 3
Eye irritancy	Category 1

#### Environmental Hazards



Toxic to aquatic organisms

#### Physical Hazards

Store away from oxidizing agents, strong acids and bases.

#### Label elements

Signal Word **DANGER PELIGRO**

#### Hazard statements



Corrosive to eyes. Moderately irritant to skin. Do not get in eyes, on skin, or on clothing.

#### Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood

**Applicators and other handlers must wear** long sleeved shirt and long pants, shoes socks, goggles or face shield and chemical resistant gloves. Some materials that are chemical-resistant to this product are polyvinyl chloride, nitrile rubber, or butyl rubber. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

Follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Precautionary Statements - Response**

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a Poison Control Center or doctor for treatment advice.

If medical advice is needed, have container and /or booklet label at hand.

**Precautionary Statements - Storage**

Keep pesticide in original container. Do not use in food or drink containers.

**Precautionary Statements - Disposal**

Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment, then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration.

**3. Composition / information on ingredients**

Chemical Name	% w/w	CAS No.	Trade secret
copper sulfate pentahydrate	95 - 98 %	7758-99-8	N
hydrogenated vegetable oil	2 - 5 %	8033-29-2	N

**4. FIRST AID MEASURES**

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water or 15 to 20 minutes.
- Remove contact lenses, if present, after the first minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:**

- Immediately call a poison control center or doctor.
- Do not induce vomiting unless told to by the poison control center or doctor.
- Do not give any liquid to the person.
- Do not give anything by mouth to an unconscious person.

**If medical advice is needed, have container and /or booklet label at hand.**

**5. FIRE FIGHTING MEASURES**

**Extinguishing media**

Suitable extinguishing agents: If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

Combustion products may include metallic oxides or other toxic vapors.

**Advice for firefighters:**

**Protective equipment:** Wear protective equipment Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat.

**Additional information (precautions):** Move product containers away from fire or keep cool with water spray as a protective measure, where feasible.

## 6. ACCIDENTAL RELEASE MEASURES

### LAND SPILL:

**Large spill:** Barricade around spill as necessary. If wet, absorb product with a clay-based absorbent. Remove dry product, absorbent and contaminated soil for disposal in accordance with applicable local regulations.

**Small spill:** Remove contaminated soil and place in containers for disposal in accordance with applicable local regulations.

Avoid contamination of water bodies during cleanup and disposal.

**SPILLAGE ONTO HARD SURFACES:** Limit area of spillage by barricading if necessary. If wet, absorb product with a clay-based absorbent.

Sweep up or vacuum, and place product into containers for disposal in accordance with applicable local regulations. Clean surface with water.

**SPILLAGE INTO WATER:** Where possible, remove any intact containers from the water. Advise local water authority that none of the affected water should be used for irrigation or for the abstraction of potable water until natural dilution returns the glyphosate value to a negligible level.

### IN ALL CASES

Wear protective equipment as needed (see section 8).

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Handling** Avoid contact with skin and eyes. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Keep out of reach of children. Wear protective gloves/clothing and eye/face protection.

### Conditions for safe storage, including any incompatibilities

**Storage** Keep containers tightly closed in a cool, well-ventilated place.

**Incompatible materials** Strong oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS: NONE ESTABLISHED

**ENGINEERING CONTROLS:** Enclosed Cockpits: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)].

Mechanical Flagging Engineering Controls: Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

### PERSONAL PROTECTION:

#### Personal protective equipment

Wear long sleeved shirt and long pants, shoes socks, goggles or face shield and chemical resistant gloves. Some materials that are chemical-resistant to this product are polyvinyl chloride, nitrile rubber, or butyl rubber. If you want more options, follow the instructions for category A on an EPA chemical resistance category selection chart.

#### General hygiene considerations

Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Blue granular or powder
Odor:	none
Density:	114 lb / cu ft
Vapor Pressure (mm/Hg):	Negligible @ 20°C
Solubility in Water:	dispersible, soluble in water
Melting Point:	Not applicable
pH @ 20°C:	4 @ 10% in water

### 10. STABILITY AND REACTIVITY

**CHEMICAL STABILITY (Conditions to avoid):** Stable under normal conditions.

**INCOMPATIBILITY:** Strong acids or bases, strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of sulfur, copper oxides

**HAZARDOUS POLYMERIZATION:** Will not occur

### 11. TOXICOLOGICAL INFORMATION

The following information is available for the formulation:

INGESTION:	Oral LD <sub>50</sub> (rat)	400 - 550 mg/kg
DERMAL:	Dermal LD <sub>50</sub> (rat)	>2000 mg/kg
INHALATION:	Inhalation LC50 (rat)	1.3 mg / L
SENSITIZATION:	Skin sensitization (guinea pig)	non-sensitizer
IRRITATION:	Primary skin irritation (rat)	moderate reversible irritation
EYE IRRITATION	Primary Eye Irritation	Corrosive to eyes

### 12. ECOLOGICAL INFORMATION

#### ECOTOXICITY DATA

**General:** VodaGuard C is toxic to aquatic organisms.

Fish: LC50 (96h) Rainbow trout (7758-98-7): 0.1-2.5 mg/L

Crustacea - LC50 (48 h) for D. magna (7758-98-7): 33.8 µg/L

**Environmental fate:** Readily degradable in the environment.

**Bioaccumulative potential:** Copper is accumulated by plants and animals, but it does not appear to biomagnify from plants to animals. In air, copper aerosols (in general) have a residence time of 2 to 10 days.

**13. DISPOSAL CONSIDERATIONS**

**Product**

Excess product may be disposed of by agricultural use according to label instructions.  
Keep out of drains, sewers, ditches and water ways.  
Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.  
Follow all local/regional/national/international regulations.

**Contaminated packaging** Refer to product label.

**14. TRANSPORTATION INFORMATION**

**DOT / TDG \**

UN-Number 3288  
UN proper shipping name Toxic solid, Inorganic, N.O.S., (Cupric Sulfate)  
Transport Hazard Class:  
6.1 Toxic substances  
Packing group:III  
Environmental hazard: Severe Marine Pollutant

**15. REGULATORY INFORMATION**

U.S. FEDERAL REGULATIONS: This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**signal word** DANGER  
**Ventilation Control** PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.  
**Keep out of Reach of Children. Corrosive.** Causes irreversible eye damage. May be fatal if swallowed. Harmful if absorbed through skin or inhaled. Do not get in eyes, on skin, or on clothing. Avoid breathing dust. Wear protective eyewear, such as goggles, face shield, or safety glasses.

**United States (USA)**

**SARA Section 311/312 (Specific toxic chemical listings):**

Acute

**SARA Section 313 (Specific toxic chemical**

**listings):** 7758-99-8 Cupric sulfate, Copper compounds

**RCRA (hazardous waste**

**code):** None of the ingredients is listed

**TSCA (Toxic Substances**

**Control Act):**All ingredients are listed.

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**CERCLA (Comprehensive Environmental Response, Compensation, and Liability**

**Act):** 7758-99-8 Cupric Sulfate Pentahydrate (Copper compounds) 10 lbs

**OSHA/Cal OSHA:** This SDS document meets the requirements of both OSHA (29 CFR 1910.1200 and Cal OSHA (Title 8 CCR 5194 (g)) hazard communication standards. Refer to Sections 2 and 8 for regulatory exposure limits.

Proposition 65 (California):

Chemicals known to cause cancer: None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed

Chemicals known to cause developmental toxicity: None of the ingredients is listed

**CANADA:**

Canadian Domestic Substances List (DSL): All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%): None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

7758-98-7 Copper (II) sulfate

7758-99-8 Pentahydrate version of compound on list

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**16. OTHER INFORMATION**

**SDS Status:**

**Date of this Revision: March 20, 2022**

**Date of Previous Revision: NA**

**Person Responsible for Preparation: Don O'Shaughnessy, Ph.D., DABT, President  
DOC Inc.**

**Reasons for Revision: NA**

**DISCLAIMER:**

This information is provided for the limited guidance to the user. While Amvodaguard, Inc. believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

**ABBREVIATIONS:**

a.i.	-	Active ingredient
ACGIH	-	American Conference of Governmental Industrial Hygienists
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
IARC	-	International Agency for Research on Cancer
NTP	-	National Toxicology Program

SARA	-	Superfund Amendments and Reauthorization Act
TSCA	-	Toxic Substances Control Act
DOT	-	Department of Transportation
IMDG	-	International Maritime Dangerous Goods
IATA	-	International Air Transport Association

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