

**SECTION 1 - IDENTIFICATION**

**Product Identifier:** Hydra Kleen

**Product Use:** Algae Control

**Common Names:**

Meras Engineering, Inc.  
2401 E. Orangeburg Ave #675  
USA  
(415)240-4918  
orders@meras.com

**24 Hr. Emergency #:** ChemTrec (800) 424-9300

**SECTION 2 - HAZARDS IDENTIFICATION**

**Classification of the Substance or Mixture:**  
None

**Signal Word:** None

**Hazard Statement(s):**  
None

**Precautionary Statements:**

**Prevention-**

P264: Wash skin thoroughly after handling.  
P270: Do not eat, drink, or smoke when using this product.  
P281: Use personal protective equipment as required.

**Response-**

P301+P312: IF SWALLOWED: call a POISON CENTER or doctor/physician if you feel unwell.  
P302+352: IF ON SKIN: Wash with plenty of water.  
P305+351+337+P313: IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. If eye irritation persists: Get medical advice/attention.  
P363: Wash contaminated clothing before reuse.

**Storage-**

P403+233: Store in a well ventilated place. Keep container tightly closed.  
P405: Store locked up.

**Disposal-**

P501: Dispose of contents/container to an approved waste disposal plant.

**SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient(s)	CAS No.	Concentration (%)
Copper sulfate pentahydrate	7758-99-8	10.94%

**SECTION 4 - FIRST-AID MEASURES**

**Inhalation:** Get medical advice/attention if you feel unwell.

**Skin Contact:** Wash affected skin with soap and water. If irritation (redness, rash, blistering) develops, get medical attention.

**Eye Contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**Ingestion:** Call a physician or poison control center immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Rinse mouth and drink water.

**Most Important Symptoms And Effects, Both Acute And Delayed:** May cause slight irritation. May cause vomiting, nausea, gastric pain, and cramps.

**Indication Of Any Immediate Medical Attention And Special Treatment Needed:** No data available.

## SECTION 5 - FIRE-FIGHTING MEASURES

**Suitable Extinguishing Equipment:** Dry Chemical  
Carbon Dioxide  
Water Fog  
Foam

**Special Hazards Arising From The Substance Or Mixture:** None known.

**Special Protective Equipment And Precautions For Firefighters:** Avoid breathing fire vapor.  
Firefighters should wear an approved self-contained breathing apparatus (SCBA).  
Use water spray to cool unopened containers.  
Use caution. See Section 7 for more information on safe handling.  
See Section 8 for more information on personal protection equipment. See Section 13 for disposal information.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment, And Emergency Procedures:** Wear appropriate PPE.  
Keep from contacting skin or eyes.  
Ensure adequate ventilation.  
Stay upwind of spilled material.

**Environmental Precautions:** Prevent further release (leakage/spillage) if safe to do so.  
Do not allow product to enter drains.  
Do not allow to drain to environment.

**Methods And Materials For Containments And Cleaning Up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, saw dust) or pillows, pads, and absorbing berms.  
Dilute with plenty of water.  
Dispose of contaminated material according to Section 13. Ensure adequate ventilation.  
Following product recovery, flush area with water.

**Reference To Other Sections:** See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for information on proper disposal.

## SECTION 7 - HANDLING AND STORAGE

**Handling Precautions:** Avoid contact with eyes, skin, or clothing.  
Keep containers closed when not in use.  
Do not expose containers to open flame, excessive heat, or direct sunlight.  
Do not puncture or drop containers.  
Handle with care and avoid spillage on the floor.  
Keep material out of reach of children.  
Keep material away from incompatible materials.  
Wash thoroughly after handling.  
Ensure adequate ventilation.

**Storage Requirements:** Keep container tightly closed.  
Avoid storage in direct sunlight.  
Store in a well-ventilated place.

**Incompatible Materials:** Concentrated chlorinated materials.

**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Limits:**

<u>Component(s)</u>	<u>CAS No.</u>	<u>PEL</u>	<u>OSHA Ceiling</u>	<u>STEL</u>	<u>REL</u>	<u>NIOSH IDHL</u>	<u>ACGIH TLV</u>	<u>ACGIH Ceiling</u>
Copper Sulfate Pentahydrate	7758-99-8			3 mg/m <sup>3</sup>		100 mg/m <sup>3</sup> Cu dust/mist	1 mg/m <sup>3</sup>	

**Engineering Controls:**

All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94).  
 Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas.  
 Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

**Personal Protective Equipment:**

All safety equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Type of protective equipment should be selected based on concentration amount and conditions of use of this material. Full-face vapor respirator may be required as backup to engineering controls when proper engineering controls are not in place to keep TLV and PEL limits below defined thresholds. Respiratory protection must comply with 29 CFR 1910.134.

**Eye/Face-**

- Safety goggles (Face shield recommended).

**Skin/Body-**

- Gloves (PVC, neoprene, or nitrile).
- Long sleeves and long pants recommended.

**Respiratory-**

- None required.

**General Hygiene Considerations-**

- Handle in accordance with good industrial hygiene and safety practice.
- Keep away from foodstuffs, beverages, and feed.
- Wash face, hands, and any exposed skin thoroughly after handling.
- Appropriately dispose of contaminated clothing; wash before re-use, if applicable.
- Avoid contact with eyes, skin, and clothing.

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

**Form:** Liquid

**Color:** Blue

**Odor:** None

**pH:** No data available.

**Melting/Freezing Point:** No data available.

**Initial Boiling Point and Boiling Range:** 212°F.

**Flash Point:** No data available.

**Evaporation Rate:** No data available.

**Flammability (Solid, Gas):** No data available.

**Upper/Lower Flammability or Explosive Limits:** No data available.

**Vapor Pressure (Mm Hg):** No data available.

**Vapor Density:** No data available.

**Relative Density:** 10.09 lbs/gal

**Specific Gravity:** 1.21

**Solubility in Water:** Miscible

**Partition Coefficient (N-Octanol/Water):** No data available.

**Auto Ignition Temperature:** No data available.

**Decomposition Temperature:** No data available.

**Viscosity:** No data available.

**Volatiles (% By Weight):** No data available.

**Volatile Organic Compounds (VOC's):** No data available.

**SECTION 10 - STABILITY AND REACTIVITY**

**Reactivity:** Not reactive under normal and ambient conditions.

**Chemical Stability:** Stable under normal and ambient conditions.

**Possibility of Hazardous Reactions:** No data available.

**Conditions to Avoid:** No data is available.

**Incompatible Materials:** Concentrated chlorinated products.

**Hazardous Decomposition Products:** Sulfur trioxide above 653°C.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Routes of Entry:** Eyes, dermal, ingestion, inhalation.

**Acute Toxicity:**Copper sulfate pentahydrate

Oral Toxicity (LD<sub>50</sub>)- 300 mg/kg- Rat  
Dermal Toxicity (LD<sub>50</sub>)- >2 g/kg- Rat

**Primary Eye Irritation:** Strong irritating effect.  
**Primary Skin Irritation:** Strong irritating effect.

**Sensitization:** No data available.

**Carcinogenicity:**

IARC- No ingredients listed.  
ACGIH- No ingredients listed.  
NTP- No ingredients listed.  
OSHA- No ingredients listed.

**Reproductive Toxicity:** No data available.

**Specific Target Organ Toxicity-  
Single Exposure:** No data available.

**Specific Target Organ Toxicity-  
Repeated Exposure:** No data available.

**Aspiration Hazard:** No data available.

**SECTION 12 - ECOLOGICAL INFORMATION****Ecotoxicity:**

Toxicity to Fish (LC<sub>50</sub>)- Lepomis macrochirus: 0.66 – 1.15 mg/l (96 H)

Toxicity to Daphnia and Other  
Aquatic Invertebrates (EC<sub>50</sub>)- Daphnia magna: 0.147 – 0.227 mg/l (48 H)

**Persistence and Degradability:** No data available.

**Bioaccumulation Potential:** No data available.

**Mobility in Soil:** No data available.

**Results of PBT and vPvB  
Assessment:** This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

**Other Adverse Effects:** No data available.

**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Recommendation:** Hazardous wastes shall be managed responsibly.  
Contact a licensed professional waste disposal service to dispose of this material.  
Disposal must comply will local, state, and federal regulations.  
Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of an NPDES permit.

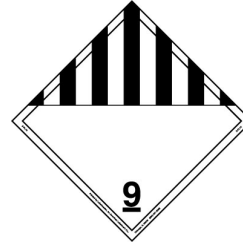
**Cleansing agent:** Water should be used as a cleansing agent to rinse empty containers and/or soiled PPE.

**SECTION 14 - TRANSPORTATION INFORMATION**

**NOTE:** The shipping classification information in this section is only applicable to a single container of 15 gallons or more.

**US DOT**

UN Number: 3082  
 Class: 9  
 Packing Group: III  
 Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s (copper sulfate pentahydrate)  
 Marine Pollutant: Yes



**IMDG**

UN Number: 3082  
 Class: 9  
 Packing Group: III  
 EMS-No.: No data available.  
 Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s (copper sulfate pentahydrate)

**IATA**

UN Number: 3082  
 Class: 9  
 Packing Group: III  
 Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s (copper sulfate pentahydrate)

**Limited Quantity:** 5 L

**Excepted Quantity:** (E2) Max inner packaging- 30g/30mL. Max outer packaging- 500g/500 mL.

**SECTION 15 - REGULATORY INFORMATION**

**EPA Registration No.:** 27588-2-91209

**Cal DPR Registration No.:** 27588- 2-AA- 91209

<u>Listed Hazardous Chemical</u>	<u>CAS No.</u>	<u>EPCRA EHS</u>		<u>CERCLA HS</u>	<u>CAA 112r</u>	<u>EPCRA 313</u>	<u>Prop 65 Listed</u>
		<u>RQ (lbs)</u>	<u>TPQ (lbs)</u>	<u>RQ (lbs)</u>	<u>TQ (lbs)</u>		
Copper sulfate pentahydrate	7758-99-8			10		Yes	

Legend

EPCRA- Emergency Planning and Community Right-to-Know Act  
 CERCLA- Comprehensive Environmental Response, Compensation and Liability Act  
 CAA- Clean Air Act  
 RQ- Release Quantity  
 TPQ- Threshold Planning Quantity  
 EPA- Environmental Protection Agency  
 DPR- Department of Pesticide Registration

**SECTION 16 - OTHER INFORMATION**

**NFPA**

**NOT DETERMINED**

NFPA Rating Explanation Guide					
RATING NUMBER	HEALTH HAZARD	FLAMMABILITY HAZARD	INSTABILITY HAZARD	RATING SYMBOL	SPECIAL HAZARD
4	Can be lethal	Will vaporize and readily burn at normal temperatures	May explode at normal temperatures and pressures	ALK	Alkaline
3	Can cause serious or permanent injury	Can be ignited under almost all ambient temperatures	May explode at high temperature or shock	ACID	Acidic
2	Can cause temporary incapacitation or residual injury	Must be heated or high ambient temperature to burn	Violent chemical change at high temperatures or pressures	COR	Corrosive
1	Can cause significant irritation	Must be preheated before ignition can occur	Normally stable. High temperatures make unstable	OX	Oxidizing
0	No hazard	Will not burn	Stable	Radioactive symbol	Radioactive
				W	Reacts violently or explosively with water
				W OX	Reacts violently or explosively with water and oxidizing

**HMIS III**

**2 HEALTH**

**0 FLAMMABILITY**

**0 REACTIVITY**

**B PERSONAL PROTECTION**

PERSONAL PROTECTION INDEX					
A	Safety Glasses		G	Safety Glasses + Gloves + Footwear	
B	Safety Glasses + Gloves		H	Safety Glasses + Gloves + Apron + Footwear	
C	Safety Glasses + Gloves + Apron		I	Safety Glasses + Gloves + Footwear + Respirator	
D	Safety Glasses + Gloves + Apron + Respirator		J	Safety Glasses + Gloves + Apron + Footwear + Respirator + Full Suit	
E	Safety Glasses + Gloves + Apron + Respirator + Full Suit		K	Safety Glasses + Gloves + Apron + Footwear + Respirator + Full Suit + Airtight Hood or Mask	
F	Safety Glasses + Gloves + Apron + Respirator + Full Suit + Airtight Hood or Mask		X	Consult your supervisor or S.O.P for "SPECIAL" handling directions	
A	n	o	p	q	r
Safety Glasses	Splash Goggles	Face Shield & Eye Protection	Gloves	Boots	Synthetic Apron
t	u	w	y	z	Additional Information
Dust Respirator	Vapor Respirator	Dust & Vapor Respirator	Full Face Respirator	Airtight Hood or Mask	

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