



ALGAE CONTROL



EPA Reg. No. 27588-2 EPA Est. No. 27588-CA-01

Department of Agriculture
STATE OF HAWAII

LICENSED

PERIOD **2015-2017** LIC. NO.

8484.1

For Use In:

Fire Ponds, Reservoirs,
Lakes and Ponds

KEEP OUT OF REACH OF CHILDREN

CAUTION

See other cautions on back label.

Active Ingredient:

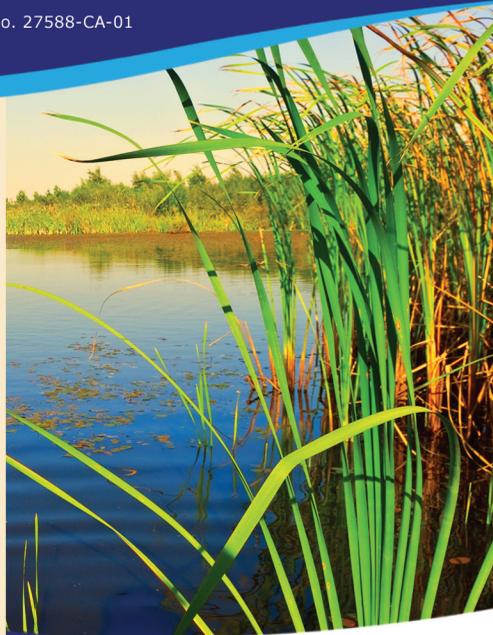
Copper Sulfate Pentahydrate*....	10.9%
CAS No. 7758-99-8	
Other Ingredients:.....	89.1%

Total: 100.0%

* Metallic Copper Equivalent: 2.7%



Net Volume:
1 Gallon / 3.78 Liters



DIVERSIFIED WATERSCAPES INC.
Laguna Niguel, CA 92677

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing.

FIRST AID

IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do NOT induce vomiting, UNLESS told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

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 eye(s).
- Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

continued

FIRST AID *continued*

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Pesticide Information Center at 1-800-858-7378 for emergency medical treatment information.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders and applicators must wear the following: Long-sleeved shirt, long pants, and shoes and socks.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove clothing/PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. The oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than ½ of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required.

Certain water conditions including low pH (≈ 6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and “soft” waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

NOTE:

Trout, koi and other species of fish may be killed at application rates recommended on this label. However, fish toxicity generally decreases when the hardness of the water increases. Consult your state fish and game agency before applying this product to public waters.

PRODUCT INFORMATION

Formula F-30, when properly applied, will control a broad spectrum of algae. Especially effective results have been obtained against spirogyra, cladophora, vaucheria, chara, microcystis, ulathrix and oscillatoria.

If treated water is to be used as a source of water for human consumption, the metallic copper residue must not exceed 1 part per million (ppm).

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

The maximum application rate per application is 1 ppm of metallic copper.

The minimum retreatment interval is 14 days.

No more than ½ of the water body may be treated at one time.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and the method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

DROPLET SIZE: Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

WIND SPEED: Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

TEMPERATURE INVERSIONS: If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

OTHER STATE and LOCAL REQUIREMENTS: Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

EQUIPMENT: All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

FOR AERIAL APPLICATION: The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

FOR GROUNDBOOM APPLICATION: Do not apply with a nozzle height greater than 4 feet above the crop canopy.

SURFACE SPRAY / INJECTION ALGAECIDE APPLICATION

For effective control, proper chemical concentration should be maintained for a minimum of three hours contact time. The application rates in the chart are based on static or minimal flow situation. Where significant dilution or loss of water from unregulated inflows or outflows occur (raceways) within a three hour period, Formula F-30 may have to be metered in.

- Identify the algae growth present as one of the following types; Planktonic (suspended), Filamentous (mat-forming), or Chara/Nitella.
- Determine the surface acreage (1 acre = 43,560 sq. ft.) and average depth of infected area.
- Refer to the chart to determine gallons of Formula F-30 to apply per surface acre.

HOW TO APPLY FORMULA F-30

Formula F-30 may be diluted with 5 parts water to 1 part Formula F-30 and coarse sprayed from shore. Another effective method is to evenly distribute the product from the back of a moving boat. Generally 1 gallon of Formula F-30 will treat about 326,000 gallons (1 acre foot) of water to 0.1 ppm metallic copper equivalent. Apply Formula F-30 when algae growth first appears and the temperature of the water to be treated exceeds 60°F.

HOW TO ESTIMATE GALLONS OF WATER / ACRE FEET

Measure Length (L), Width (W) and average Depth (D) in feet. Rectangular or Square shaped bodies of water: **$L \times W \times D \times 7.5 = \text{approximate gallons}$** . Circular or Elliptical bodies of water: **$L \times W \times D \times 5.9 = \text{approximate gallons}$** . Total gallons divided by 325,851.6 (gallons per acre feet) = Acre Feet

DOSAGE TABLE

GAL. Formula Per Acre-foot Water	=	PPM Copper Sulfate Pentahydrate
0.5 gal.	=	.20
1.0 gal.	=	.40
2.0 gal.	=	.81

During periods of heavy algae growth, repeat application may be needed. If algae is still present after two weeks repeat the application as directed.

DRIP SYSTEM APPLICATION FOR USE IN POTABLE WATER AND IRRIGATION CONVEYANCE SYSTEMS

- Formula F-30 should be applied as soon as algae or hydrilla begins to interfere noticeably with normal delivery of water (clogging of lateral headgates, suction screens, weed screens, and siphon tubes.) Delaying treatment could perpetuate a problem causing massing and compacting of plants. Heavy infestations and low flow may cause poor chemical distribution resulting in unsatisfactory control. Under these conditions, increasing water flow rate during application, may be necessary.

- Prior to treatment it is important to accurately determine water flow rates in the absence of weirs, orifices, or similar devices which give accurate water flow measurements, volume of flow may be estimated by the following formula.

Average Width (W) x Average Depth (D) x Velocity (V)* (feet/second) x 0.9 = Cubic Feet per Second (C.F.S.)

Example: $26 \times 5 \times 1.7 \times 0.9 = 198.9$ cubic feet per second.

(Velocity is the time it takes a floating object to travel a given distance. Dividing the distance traveled (feet by the time (seconds) will yield velocity (feet/second). This measurement should be repeated at least three times at the intended application site and then averaged.

- After accurately determining the water flow rate in C.F.S. or gallons/minute, find the corresponding Formula F-30 on the chart below:

WATER FLOW RATE		FORMULA F-30 DRIP RATE*		
C.F.S	Gal./Min.	Qts./Hr.	ML/Min.	Fl. Oz./Min.
1	450	1	16	0.5
2	900	2	32	1.1
3	1350	3	48	1.6
4	1800	4	64	2.1

- Calculate the amount of Formula F-30 needed to maintain the drip rate for a period of 3 hours by multiplying Qts./Hr. x 3: ml/Min. x 180: or Fl. Oz./Min. x 180. Dosage will maintain 1.0 ppm copper concentration in the treated water for the 3 hour period. Introduction of the chemical should be made in the channel at weirs or other turbulence creating structure to promote the dispersion of Formula F-30.

- Pour the required amount of Formula F-30 into a drum or tank equipped with a brass needle valve and constructed to maintain a constant drip rate. Readjust accordingly if flow rate changes during the 3 hour period.
- Distance of control obtained down the waterway will vary depending upon density of vegetation growth. Periodic maintenance treatments may be required to maintain seasonal control.

NOTICE – To the extent consistent with applicable law, neither the manufacturer nor the seller makes any warranty expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use of this material when such use is contrary to label instructions. Read and follow the label directions carefully.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Keep container closed when not in use. Open dumping is prohibited.

PESTICIDE DISPOSAL: Pesticide spray mixture or rinsate that cannot be used or chemically reprocessed should be disposed of according to procedures approved by Federal, State, or Local Disposal Authorities.

CONTAINER DISPOSAL: Non-refillable Container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or place in trash.

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CONTAINER DISPOSAL: Non-refillable Container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or place in trash.