

RLG

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PROCESS
BLACK

DATE: 11/30/07

COMPANY: Sanco Industries, Inc.

ATTENTION: John Battel

DESCRIPTION: Crystal Plex

LABEL SIZE: 8.5 x 11

SHAPE: Sheet

LABELS/OD:

UPC: none

FINISH: UV VARNISH

STOCK:

ADHESIVE:

RLG PART #: 3141-107623

ARTIST: JJ/AT

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DIELINE
(does not print)

REWIND 2

**RLG Proof Approval**

Color proofs are not
true representations
of color, use for color
breaks only.

APPROVED
AS IS:_____
Signature of Authorized Customer Representative

Date

CHANGES:

(Please mark below)

Signature of Authorized Customer Representative

Date

See Attached

Crystal Plex

Algae Control

FOR USE IN: Lakes; potable Water Reservoirs; Swimming Areas; Farm, Fish, Industrial, Golf Course, and Irrigation Ponds; Crop and Non-crop Irrigation Conveyance Systems; Canals; Ditches and Laterals; Fish Hatcheries

Active Ingredient:

*Copper Sulfate Pentahydrate	19.8%
Other Ingredients	80.2%
Total	100.0%

*Metallic copper equivalent 5.04%

**KEEP OUT OF REACH
OF CHILDREN
DANGER**

Distributed by:
Sanco Industries, Inc.,
Fort Wayne, Indiana, USA
888-697-2626

FIRST AID

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. Call a poison control center or doctor for treatment advice.

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 Inhaled: Move person to fresh air. If person is not breathing call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further 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.

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.]

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive: Causes irreversible eye damage. Do not get in eyes or on clothing. Wear goggles or safety glasses when handling. Harmful if swallowed, inhaled, or absorbed through skin. Contact with skin may cause allergic skin response. Avoid contact with skin. Wash thoroughly with soap and water after handling. As with all chemical applications, apply best management practices to avoid unnecessary contact with concentrate or spray mixture. For 24-hour assistance or information regarding spill, leak, fire, or exposure to this product, please call Chemtrec at 1-800-424-9300.

ENVIRONMENTAL HAZARDS

Fish and Aquatic Organisms: This product may be toxic to Trout, Koi, and other species of fish at application rates recommended on this label, especially in soft or acidic waters. Fish toxicity is directly correlated with water hardness and generally decreases as the hardness of the water increases. If the carbonate hardness is below 50 ppm, do not use this product in waters containing susceptible fish species without consulting Sanco Industries, Inc. or local authority prior to treatment. Direct application of Crystal Plex to water may cause a significant reduction in populations of aquatic invertebrates, plants, and certain species of fish. Do not treat more than one-half of a lake or pond at one time in order to avoid depletion of oxygen from decaying vegetation. Allow 1 to 2 weeks between treatments for oxygen levels to recover.

Do not contaminate water when disposing of equipment wash waters (See disposal instructions). Consult your local State Fish and Game Agency before applying this product to public waters. Permits may be required before treating such waters.

Endangered Species Restrictions: It is a violation of Federal laws to use any pesticide in a manner that results in the death of an endangered species or adverse modification of their habitat. The use of this product may pose a hazard to certain Federally designated endangered species known to occur in specific areas within the following counties:

STATE	SPECIES	BULLETIN NO.	COUNTY
CALIFORNIA	Solano Grass	EPA/ES-85-13	Solano
TENNESSEE	Slackwater Darter	EPA/ES-85-04	Lawrence Wayne Hancock
	Freshwater Mussels	EPA/ES-85-07	Claiborne Hawkins Sullivan
ALABAMA	Slackwater Darter	EPA/ES-85-05	Lauderdale Limestone Madison
VIRGINIA	Freshwater Mussels	EPA/ES-85-06	Grayson Smyth Scott Washington Lee

*****PLEASE NOTE***** Before using this product in the above counties, you must obtain the EPA bulletin specific to your area. This bulletin identifies areas within these countries where the use of this pesticide is prohibited, unless specified otherwise. The EPA bulletin is available from either your County Agricultural Extension Agent, the Endangered Species Specialist in your State Wildlife Agency Headquarters, or the appropriate Regional Office of the U.S. Fish and Wildlife Service.

THIS BULLETIN MUST BE REVIEWED PRIOR TO PESTICIDE USE.

Potable Water: Do not allow water containing in excess of 1 ppm copper derived from Crystal Plex to flow into any water to be used as potable water.

Terrestrial Plants: Do not apply this product in its concentrated form directly to any crop plants, grass, or ornamental plants as injury may result.

APPLICATION AND HANDLING

This product is corrosive to cotton fabrics. Do not allow clothing to come in contact with concentrate or dilution. Application, handling or storage equipment **MUST** consist of fiberglass, PVC's, polypropylenes, viton, most plastics, or stainless steel. Never use mild steel, nylon, brass, or copper around full strength Crystal Plex. Wash spray equipment after each application.

DIRECTIONS FOR USE

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

Permits for the use of this product in public water may be required. Check with local authorities.

STORAGE AND DISPOSAL

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

Storage: Crystal Plex is a concentrate and must be stored in its original container or handled and stored as outlined above (please see "APPLICATION AND HANDLING"). **Do not allow Crystal Plex to freeze; freezing may cause product separation.** Seller makes no warranty for performance of the product that has been frozen. Keep container closed when not in use. In case of a spill, neutralize with limestone or baking soda before disposal. May deteriorate concrete.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse all containers prior to disposal and then offer for recycling, puncture and dispose of in an approved manner, or dispose by incineration if allowed by local and state authorities. If disposal by incineration, stay out of smoke.

GENERAL INFORMATION

Crystal Plex is effective in controlling a broad range of algae including; *Chara*, *Spirogyra*, *Cladophora*, *Ulothrix* and *Oscillatoria*. In addition, Crystal Plex is effective in controlling rooted and floating aquatic plants such as *Hydrilla*, *Potamogeton sp.*, and Water Hyacinth. The formulation of Crystal Plex protects against the precipitation of copper with carbonates and bicarbonates in the treated water and results in increased time of exposure for **true residual activity**. In addition, this formulation allows for application at any time - including overcast/ cloudy conditions as well as **during night-time hours**. Water treated with Crystal Plex may be used for swimming, fishing, drinking, livestock watering, and irrigation immediately after treatment. For best results,

apply when livestock water consumption is low or watering area is not in use. Crystal Plex effectively controls *Chara*, *Spirogyra*, *Cladophora*, *Ulothrix* and *Oscillatoria*; algae growth commonly found in livestock watering tanks, troughs, and ponds.

ALGAECIDE APPLICATION

Crystal Plex can be applied by simply pouring into the water, a surface spray, or by injection. For effective control, the proper chemical concentration should be maintained for a minimum of three hours duration to assure adequate uptake. The application rates in the chart below are based on static or low flow conditions. When significant dilution occurs from inflow of untreated waters within the three-hour period the chemical may need to be metered. (See drip system application.)

- Identify the algae growth present as one of the following: planktonic, filamentous, or *Chara*.
- Determine the surface area and average depth to be treated.
- Refer to the chart below to determine gallons of Crystal Plex to apply per surface acre.

**Application Rates
Gallons per Surface Acre**

Algae Type	ppm Copper	Average Depth in Feet			
		1 ft.	2 ft.	3 ft.	4 ft.
Planktonic	0.2	1.0 gal.	2.2 gal.	3.2 gal.	4.3 gal.
Filamentous	0.2	1.0 gal.	2.2 gal.	3.2 gal.	4.3 gal.
<i>Chara</i>	0.4	2.2 gal.	4.3 gal.	6.5 gal.	8.6 gal.

For planktonic algae and free floating filamentous algal mats, application rates should be based on treating the upper 3-4 feet of water where the algae is growing. If fish population is present and algae growth is heavy in treatment area, treat only 1/2 to 1/3 of the water body at a time to avoid potential fish kill by oxygen depletion. In areas of heavy growth, plan your treatment to avoid trapping fish in coves or enclosed areas. Before application, dilute the Crystal Plex with sufficient water to ensure even application to the affected area. For quickest results, apply when conditions are calm and sunny. However, this product can be applied whenever weather allows or **during night time hours**. A hand or power sprayer may be used. Treat shoreline areas first and then continue treatment, as needed, into main water body.

For algaecide application in waters used for livestock **and other agricultural areas**; For **water holding or storage tanks**, stock watering ponds, tanks, and troughs, apply 1/4 fluid ounce of Crystal Plex per 250 gallons of water (8 milliliters per 1,000 liters) to achieve the desired 0.4 PPM (mg/L) of copper for algae control. Product can be simply added to the water column as the residual control will allow for even distribution throughout the water column. Where existing algae mats are present at time of treatment, most effective control will be obtained by breaking up mats and/or evenly dispersing diluted Crystal Plex

over the algae mats. Apply Crystal Plex as needed to control and prevent algae growth; more frequent applications may be needed in times of higher water temperatures.

DETERMINE VOLUME OF TANK, TROUGH OR POND WATER TO BE TREATED. Measure length (L), width (W), and average depth (D) in feet (ft.) or meters (m) and calculate volume using one of the following formulas:

***For square or rectangle tanks, troughs and ponds:**

$$L(\text{ft.}) \times W(\text{ft.}) \times D(\text{ft.}) \times 7.5 = \text{Gallons.}$$

$$L(\text{m}) \times W(\text{m}) \times D(\text{m}) \times 1,000 = \text{Liters}$$

***For circular or elliptical tanks, troughs and ponds;**

$$L(\text{ft.}) \times W(\text{ft.}) \times D(\text{ft.}) \times 5.9 = \text{Gallons}$$

$$L(\text{m}) \times W(\text{m}) \times D(\text{m}) \times 786 = \text{Liters}$$

HERBICIDE APPLICATION

For rooted and submerged plants

Control of many rooted and submerged plants such as *Hydrilla* and *Potamogeton* can be obtained from use of Crystal Plex to give copper concentrations at 0.4 - 1.0 ppm. Choose the application rate dependent upon the density and stage of growth and the water depth from the chart below.

Application Rates
Gallons per Surface Acre

Growth stage Relative Density	ppm Copper	Average Depth in Feet			
		1	2	3	4
(Low Density)					
Early Season	0.4	2.2	4.4	6.6	8.8
(Moderate Density)					
Mid Season	0.7	3.8	7.6	11.4	15.2
(Heavy Density)					
Late Season	1.0	5.4	10.8	16.2	21.6

Application rates for depths greater than 4 feet may be obtained by adding the rates above to give the proper depth. Do not exceed a copper concentration of 1.0 ppm copper in the treated water.

FOR WATER HYACINTH CONTROL

The following mixture can be used as a **control** method for water hyacinth and other floating aquatic vegetation (Effective eradication requires stronger rates and/or mixtures with other herbicides - please call for specific information).

Mix 1 gallon of Crystal Plex per 7 gallons of water. Apply this solution as a coverage spray to thoroughly wet all exposed vegetation. In areas of heavy infestation, multiple applications may be required. Applications may be repeated after 7-day intervals. Non-ionic adjuvants should be used with this product to improve dispersion and/or adhesion.

DRIP SYSTEM APPLICATION FOR FLOWING WATER

Crystal Plex should be applied as soon as algae or plants begin to interfere with normal or desired water uses. Heavy infestations and flows may cause poor chemical distribution resulting in unsatisfactory control. Under these conditions, continuous feed systems offer advantage. Prior to treatment it is important to determine the water flow rates. In the absence of weirs, or flow determining devices for this information, water flow may be estimated as shown below.

Avg. Width X Avg. Depth X Velocity in feet/sec. X 0.9 = CFS(Cubic Feet/Second)

Velocity is the time it takes for a floating object to move a given distance. This measurement should be made as the average of at least three determinations taken at the treatment location.

Calculate the drip rate of Crystal Plex from the chart below (based on heavy algae growth).

Water Flow Rate		Crystal Plex drip rate		
CFS	Gal./Min	Qts./Hr.	ML/Min.	Fl. Oz./Min
1	450	3.6	58	2.0
2	900	7.2	116	4.0
3	1350	10.8	170	6.0
4	1800	14.4	226	7.6
5	2250	18.0	284	10.0

Calculate the amount of Crystal Plex needed to maintain the drip rate for a period of 4 hours by multiplying Qts./Hr. by 4, ML/Min. by 240, or Fl. Oz./Min. by 240. **This dosage will maintain the copper level at 2.0 ppm for 4 hours (to be used as a general reference rate to control heavy algae growth). Effective control of most algae species can be obtained with copper levels between .5-1.8 ppm maintained for 4-6 hours.** The chemical must be introduced at a point of turbulence.

Place the required amount of Crystal Plex into a tank equipped with a needle valve and set the drop rate as required using a stop watch and measuring tube. Readjust as required if flows change. Distance of control will vary. Treatment points should be determined in the field and place at the required intervals for control. Periodic maintenance treatments may be required.

For Drip-system Use in Livestock Watering Tanks: Tanks fed by a continuous flow of spring or well water may be equipped with a chemical drip system designed to meter-in Crystal Plex based upon water flow rates. Systems should be adjusted to maintain a concentration of 0.4 PPM (mg/L) copper in incoming stock water. Pre-dilute Crystal Plex 100:1 with water (a 1% solution) and calibrate metering valve to establish a drip rate of 1 fl. oz./min. per 10 gal./min. water flow or 40ml/min. per 50 L/min. water flow rate. Treat continuously or as needed to control and prevent algae growth.

GENERAL TREATMENT NOTES

The following suggestions apply to the use of Crystal Plex as an algaecide or herbicide:

- The product works best at temperatures at or above 60 degrees F.
- Treat when growth first appears or nuisance is first noted.
- Apply in a manner to ensure even distribution in the treatment area.
- Retreat as required. Allow 1 to 2 weeks between treatments.
- **Formula for water-column treatment:**
Gallons of Crystal Plex needed X 50,000 ppm = Gallons of water to be treated X Desired ppm of treatment (from chart).

Conversion factors: cubic feet X 7.48 = gallons

one acre/foot = 326,000 gallons (one acre - 43,560 square feet)

To calculate number of gallons or liters:

For square or rectangle bodies of water:

L(ft.) x W(ft.) x D(ft.) x 7.5 = Gallons

L(m) x W(m) x D(m) x 1000 = Liters

For circular or elliptical bodies of water:

L(ft.) x W(ft.) x D(ft.) x 5.9 = Gallons

L(m) x W(m) x D(m) x 786 = Liters

LIMITED WARRANTY AND LIMITATION OF REMEDIES

Seller warrants that the product conforms to the chemical description and is reasonably fit for the purposes stated on the label for use under normal conditions, but makes no other warranties of FITNESS OR MERCHANTABILITY expressed or implied, or any other warranty if the product is used contrary to the label instructions or under abnormal conditions not foreseeable to the seller. In no case shall the seller be liable for more than the cost of the product to the buyer, and will in no event be liable for any consequential, special or indirect damages connected with the use or handling of this product. This product is offered and the buyer or user accepts it subject to the foregoing terms, which may not be varied.

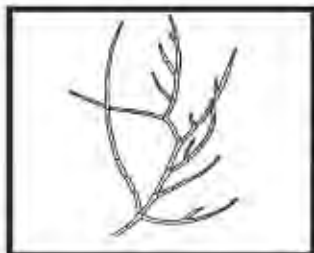
Is it important to know which type of algae or weed is in my pond?

YES. Certain types of algae require a more concentrated treatment than others. It is important to know exactly which type of algae you are treating to ensure that you do not over treat or under treat your pond. Examples of the different types of algae can be found below. Refer to this label and attached insert for appropriate use rates.

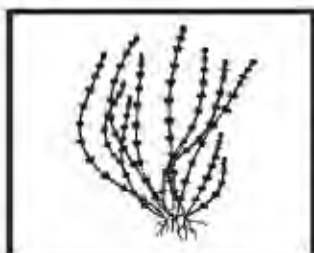
ALGAE



PLANKTONIC ALGAE: Microscopic growth often visible as a greenish tinge suspended in the upper few feet of water. Severe blooms may resemble peas soup and actually thicken the water.

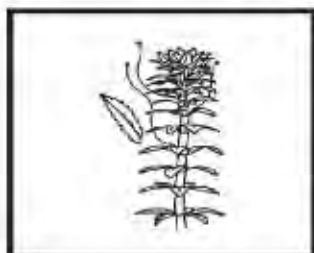


FILAMENTOUS ALGAE: Individual filaments a series of cells joined end to end that have a thread-like appearance. Often referred to as pond scum or moss. Forms surface "mats". Growth begins at the bottom and rises to the surface as a bubble-filled mass. May also form fur-like growths on logs and rocks at the bottom.

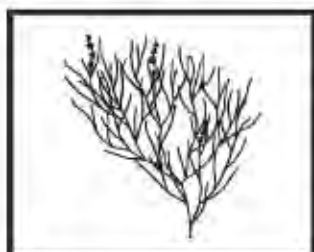


CHARA ALGAE (*Chara vulgaris*): Leaf-like structures whorled around hollow stem. Dense growth attached, but not rooted to bottom. May "carpet" large areas of a lake or pond bottom. Strong musky odor when crushed. May have a gritty texture due to mineral deposits on the surface. Do not confuse with higher weeds.

SUBMERSED WEEDS



HYDRILLA (*Hydrilla verticillata*): Leaves whorled in groups. Hydrilla leaves have a serrated edge. Whorls of leaves are compact near the growing tips. Spacing between whorls increases further down the stem.



PONDWEED (*Potamogeton* species): Leaves are stiff, narrow and thread like. Stems branched with leaves alternately attached. Spreading leaves resemble a fan with an overall bushy appearance. Nutlets appear like beads on a string. Tiny green flower appears on a spike along with nutlets above the water surface.