

# Komeen<sup>®</sup> Crystal

Aquatic Herbicide

SPECIMEN



For use in slow-moving or quiescent bodies of water including: golf course, ornamental, fish, and fire ponds; fresh water lakes, fish hatcheries, and potable water reservoirs.

#### Active Ingredient

Copper ethylenediamine complex<sup>†</sup> (CAS# 13426-91-0) ..... 50.0%

Other Ingredients ..... 50.0%

**TOTAL** ..... 100.0%

<sup>†</sup>Metallic copper equivalent = 17.5%

## Keep Out of Reach of Children DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

Refer to inside of label booklet for additional precautionary statements and directions for use including storage and disposal.

**Notice:** Read the entire label before using. Use only according to label directions. Before buying or using this product, read Warranty Disclaimer and Misuse statements inside label booklet. If terms are unacceptable, return at once unopened.

EPA Reg. No. 67690-60

FPL20160122

SePRO Corporation 11550 North Meridian Street, Suite 600, Carmel, IN 46032, U.S.A.

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

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**Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if inhaled. Do not get in eyes or on clothing. Wear appropriate protective eyewear (goggles, face shield, or safety glasses). Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid breathing dust. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.**

For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm of metallic copper in any waters.

#### FIRST AID

<b>If in eyes</b>	<ul style="list-style-type: none"><li>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.</li><li>Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>Call a poison control center or doctor immediately for treatment advice.</li><li>Have person sip a glass of water if able to swallow.</li><li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>Do not give anything to an unconscious person.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>Move person to fresh air.</li><li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>Call a poison control center or doctor for further treatment advice.</li></ul>

#### HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. In case of emergency endangering health or the environment involving this product, call **INFOTRAC at 1-800-535-5053.**

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers, loaders, applicators, and other handlers must wear the following:

- Protective eyewear;
- Long-sleeve shirt and long pants;
- Shoes plus socks; and
- Waterproof gloves.

Follow 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.

### USER SAFETY RECOMMENDATIONS

#### Users should:

- Wash the outside of gloves before removing.
- 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 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. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than 1/2 of the water body to avoid depletion of oxygen due to decaying vegetation. Wait at least 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), increase the potential acute toxicity to non-target aquatic organisms. Do not use in waters containing trout or other fish species that are highly sensitive to copper if the alkalinity is less than 50 ppm. Fish toxicity generally decreases when the hardness of water increases. This product must not be used in ornamental ponds containing Koi.

### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Read all directions for use carefully before applying this product. Use only according to label directions.

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 close proximity to the mixing area or application equipment while in use. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

Areas treated with this product may be used for fishing, swimming, and irrigation.

### PRODUCT INFORMATION

Komeen Crystal is a granular product that controls many submersed and floating aquatic plant species including hydrilla (*Hydrilla verticillata*), Brazilian elodea (*Egeria densa*), naiad (*Najas* spp.), coontail (*Ceratophyllum demersum*), elodea (*Elodea canadensis*), water lettuce (*Pistia stratiotes*), water fern (*Salvinia* and *Azolla* spp.), duckweed (*Lemna*, *Landoltia*, and *Spirodela* spp.), water hyacinth (*Eichhornia crassipes*), horned pondweed (*Zannichellia palustris*), sago pondweed (*Stuckenia pectinatus*), floating-leaved pondweeds (*Potamogeton* spp.), Eurasian watermilfoil (*Myriophyllum spicatum*) and Eurasian milfoil X native milfoil hybrids, American eelgrass, tapegrass (*Vallisneria americana*), Charophytes (*Chara* spp., *Nitella* spp., and *Nitellopsis* spp.), and other submersed and floating aquatic weed species that are sensitive to copper.

Apply when weeds are actively growing. Copper-sensitive weeds require a minimum of three (3) to twenty-four (24) hours of contact with this product in order to provide effective control. Less susceptible weeds may require longer contact time or higher doses. Significant water movement may result in dilution of the treated water and reapplication may be necessary. Results are typically visible in a few days. Susceptible aquatic weeds will generally drop below the surface of the water within 3 to 14 days after treatment. If this effect is not observed, this product may be re-applied at a minimum of 14 days after the initial application. Once weeds drop below the surface, it can take up to 6 weeks to realize the full effect of the treatment.

Komeen Crystal may be applied by aircraft or boat or from the shoreline as a surface application by spreader, eduction, or blower-type application equipment, or as a subsurface application through weighted hoses connected to an eductor application system.

#### Precautions and Restrictions

- Do not enter or allow others to enter until application is complete.
- Do not apply in such a way that this product comes in direct contact with crops, ornamentals, grass or desirable plants.
- Wash application equipment thoroughly before and after each application.

#### APPLICATION INFORMATION

In lakes, reservoirs, and ponds, the application site is defined by this label as the specific location where this product is applied. Use the lower labeled rate in soft water (less than 50 ppm alkalinity), for light infestations and less mature plants; use the higher concentration in hard water (above 50 ppm alkalinity), for dense infestations or when targeting more mature vegetation.

For aquatic weed control (including vascular plants and algae), do not exceed 1.0 ppm metallic copper during any single application. Do not treat more than half of a water body at one time. Wait a minimum of 14 days between treatments.

When treating slow-moving water, apply the product counter to the flow of water.

Weed Species	Metallic Copper Level Required For Control (ppm)
Floating-leaved pondweeds ( <i>Potamogeton</i> spp.)†	0.75 - 1.0
Brazilian elodea ( <i>Egeria densa</i> )	0.50 - 1.0
Coontail ( <i>Ceratophyllum demersum</i> )	0.50 - 1.0
Elodea ( <i>Elodea canadensis</i> )	0.50 - 1.0
Eurasian watermilfoil ( <i>Myriophyllum spicatum</i> )††	0.75 - 1.0
Horned pondweed ( <i>Zannichellia palustris</i> )††	0.75 - 1.0
Hydrilla ( <i>Hydrilla verticillata</i> )	0.75 - 1.0
Naiad ( <i>Najas</i> spp.)	0.50 - 1.0
Pondweed spp. ( <i>Potamogeton</i> spp.)	0.75 - 1.0
Sago pondweed ( <i>Stuckenia pectinatus</i> )††	0.50 - 1.0
Tapegrass, American eelgrass ( <i>Vallisneria americana</i> )	0.50 - 1.0
Charophytes ( <i>Chara</i> spp., <i>Nitella</i> spp., and <i>Nitellopsis</i> spp.)	0.30 - 1.0
Other susceptible submersed species	0.75 - 1.0

†Treatment rates may be calculated based on portion of water column with vegetation – see notes under Application Rate Calculation.

††Generally, these plants are only controlled in low water hardness (<150 ppm) or with repeat applications. Includes Eurasian X native milfoil hybrids.

This product can be effective on species of algae with a high sensitivity to copper at concentrations ranging from 0.2 to 1.0 ppm.

#### Foliar Application For Floating Aquatic Weed Control

In certain application designs, this product may be applied to floating weed species such as, but not limited to, Duckweed (*Lemna*, *Landoltia*, and *Spirodela* spp.), Water fern, (*Salvinia* and *Azolla* spp.), Water hyacinth (*Eichhornia crassipes*), and Water lettuce (*Pistia stratioides*). Such applications must not exceed 15.5 lbs. of product per acre foot. A SePRO Corporation Aquatic Specialist should be consulted on treatment design for this type of application.

#### Application Rate Calculation

For large bodies of water, determine the size (in acres) and the average depth (in feet) of the area to be treated. Application rates are calculated by using the following formula to obtain the appropriate copper concentration:

$$\text{Desired concentration of copper (ppm)} \times \text{Average depth of water (feet)} \times 15.5 = \text{pounds of product per surface acre}$$

To calculate the area and average depth of a lake or pond, use the following formulas and conversion factors. All measurements (length, width, radius, depth) are in feet.

#### Formulas

- Area of a square or rectangle (ft<sup>2</sup>) = length x width
- Area of a circle (ft<sup>2</sup>) = radius x radius x 3.14
- Average depth (ft) = sum of all depth measurements ÷ number of measurements (The more measurements taken, the more accurate the average depth will be.)

#### Conversion Factors

- 1 acre = 43,560 square feet
- 1 acre foot = 43,560 cubic feet = 325,762 gallons = 2,720,000 pounds

Average Water Depth of Treatment Site (feet)	Pounds of product per Surface Acre to Achieve the Desired Copper Concentration†		
	0.5 ppm	0.75 ppm	1.0 ppm
1	7.7	11.6	15.5
2	15.5	23.2	31.0
3	23.2	34.8	46.5
4	31.0	46.5	62.0
5	38.7	58.1	77.4
6	46.5	69.7	92.9
7	54.2	81.3	108
8	62.0	92.9	124
9	69.7	105	139
10	77.4	116	155

†In-water application rates for submersed weeds and algae may be adjusted based on proportion of the treated water volume with vegetation. See *Infested Water Volume Adjustment* below.

For smaller bodies of water, determine the size (in square feet) and the average depth (in feet) of the area to be treated.

Average Water Depth of Treatment Site (feet)	Pounds of product per 1,000 ft <sup>2</sup> to Achieve the Desired Copper Concentration†		
	0.5 ppm	0.75 ppm	1.0 ppm
1	0.17	0.27	0.36
2	0.35	0.54	0.72
3	0.52	0.81	1.07
4	0.70	1.08	1.43
5	0.87	1.36	1.79
6	1.05	1.63	2.15
7	1.22	1.90	2.51
8	1.39	2.17	2.87
9	1.57	2.44	3.22
10	1.74	2.71	3.58

†In-water application rates for submersed weeds and algae may be adjusted based on proportion of the treated water volume with vegetation. See *Infested Water Volume Adjustment* below.

#### Infested Water Volume Adjustment

In treatment areas with submersed plants only growing in a portion of the water column, product application rates may be based upon the portion of the water column containing plants. The volume would be based upon the height of plants from the bottom of the water body. For example, if average depth is 10 feet and target vegetation is 4 feet in height from the bottom, the treatment rate may be based upon an average depth of four feet and the applicable application rate for four feet of water from Table 2 or Table 3. In areas of high water exchange, do not make this adjustment due to potential for quick vertical mixing and dilution. It is recommended that a SePRO Corporation Aquatic Specialist be contacted for best methodology to quantify site characteristics and determine if an adjustment is appropriate.

#### METHODS OF APPLICATION

##### Surface Application

Apply this product by boat or from the shoreline as a surface application by spreader, eduction, or blower-type application equipment. Do not exceed 15.5 lbs. of product per acre foot.

Apply this product by boat as a subsurface application through weighted hoses connected to an eduction system. Do not exceed 15.5 lbs. of product per acre foot.

##### Aerial Application

This product may be applied using helicopter or airplane. Aerial applications must be conducted in a manner that applies target lbs. per acre evenly in the treatment area.

#### DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and 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.

### 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.

### 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.

### Additional requirements for aerial applications:

- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Release granules at the lowest height consistent with efficacy and flight safety. Do not release granules at a height greater than 10 feet above the water surface 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.

### Combination Treatment

This product may be co-applied or sequentially applied with other approved aquatic herbicides for control of a broader weed spectrum or other management objective. It is recommended that a SePRO Corporation Aquatic Specialist be consulted for the latest information on compatibility prior to mixing and then co-applying this product with other herbicide formulations. This product must not be co-applied with any product containing a label prohibition against such form of application and must be used in accordance with the more restrictive of the label limitations and precautions. Do not exceed any label dosage rate.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in original container only. Do not store near feed or foodstuffs. In case of spill, contain material and dispose of as waste.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### Container Handling:

**Non-refillable Container:** Do not reuse or refill this container. Completely empty container into application equipment. Offer for recycling if available. If recycling is not available, then puncture and dispose of empty container in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Warranty Disclaimer:** SePRO Corporation warrants that this product conforms to the chemical description on the product label. Testing and research have also determined that this product is reasonably fit for the uses described on the product label. To the extent consistent with applicable law, SePRO Corporation makes no other express or implied warranty of fitness or merchantability nor any other express or implied warranty and any such warranties are expressly disclaimed.

**Misuse:** Federal law prohibits the use of this product in a manner inconsistent with its label directions. To the extent consistent with applicable law, the buyer assumes responsibility for any adverse consequences if this product is not used according to its label directions. In no case shall SePRO Corporation be liable for any losses or damages resulting from the use, handling or application of this product in a manner inconsistent with its label.

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**SePRO Corporation**  
11550 North Meridian Street, Suite 600  
Carmel, IN 46032, U.S.A.