

# Komeen®

## 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\* (CAS# 13426-91-0) ..... 22.9%

Other Ingredients ..... 77.1%

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

\*Metallic copper equivalent = 8%

**KEEP OUT OF THE REACH OF CHILDREN**

## WARNING / AVISO

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 information and directions for use including first aid and storage and disposal.

**Notice:** Read the entire label before using. Use only according to label directions. Before buying or using this product, read *Terms and Conditions of Use*, *Warranty Disclaimer*, *Inherent Risks of Use* and *Limitation of Remedies* inside label booklet.

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

EPA Reg. No. 67690-25  
FPL20130326

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)

Some materials that are chemical-resistant to Komeen are barrier laminate, butyl rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  mils. If you want more options, follow the instructions for category A on an EPA chemical-resistant category selection chart.

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

- Long-sleeve shirt and long pants;
- Shoes plus socks; and
- Chemical-resistant gloves (such as nitrile or butyl rubber).

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. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the Komeen's concentrate. Do not reuse them.

### 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 Komeen. As soon as possible, wash thoroughly and change into clean clothing.

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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**May be fatal if swallowed. May be fatal if inhaled. Do not breathe vapor or spray mist. Harmful if absorbed through skin. Causes Moderate eye irritation. Avoid contact with skin, eyes or clothing. 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 as metallic copper in any waters.

### FIRST AID

<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>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15 - 20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<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>

### 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 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), 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. Komeen 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 Komeen 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.

### PRODUCT INFORMATION

Komeen 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* and *Landoltia* spp.), water hyacinth (*Eichhornia crassipes*) and other submersed and floating aquatic weed species that are sensitive to copper. Under certain water quality conditions, such as low water hardness, Komeen may also control Eurasian watermilfoil (*Myriophyllum spicatum*), sago pondweed (*Potamogeton pectinatus*) and American pondweed (*Potamogeton nodosus*).

Apply when weeds are actively growing. The most copper sensitive weed species require a minimum of three (3) to twenty-four (24) hours of contact with Komeen in order to provide effective control. Less susceptible species may require longer contact time or higher doses. Significant water movement may result in dilution of the treated water and reapplication may be necessary. 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, Komeen may be re-applied after a minimum of 10 to 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 may be applied by aircraft, sprayer or spray boat as a surface spray, as a subsurface application through weighted hoses, or mixed with adjuvants, a polymer (except CA), or surfactants as appropriate. As a surface or subsurface application, Komeen may be applied diluted or undiluted, whichever is most suitable to ensure uniform coverage of the treated area. Apply Komeen to the area where the greatest concentration of foliage is located in a manner that will deposit the herbicide on leaf surfaces.

Dilution with water may be necessary at the lower application rates to ensure uniform coverage of the treated area. Dilute the required amount of Komeen with enough water to ensure even distribution with the type of equipment being used.

#### Precautions and Restrictions

- Do not enter or allow others to enter until application is complete.
- Do not apply Komeen directly to, or otherwise permit it to come into contact with any desirable plants as injury may result.
- Do not apply in such a way that concentrated Komeen comes in contact with crops, ornamentals, grass or desirable plants.
- Wash spray equipment thoroughly before and after each application.

#### Spray 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.

#### 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

#### Additional requirements for aerial applications:

- 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.

#### Additional requirements for ground boom application:

Do not apply with a nozzle height greater than 4 feet above the water.

## APPLICATION INFORMATION

In lakes, reservoirs, and ponds, the application site is defined by this label as the specific location where Komeen is applied. Use the lower listed 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 and 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; wait a minimum of 14 days between treatments, except for algae control in aquaculture ponds when fish are present. In that case, do not exceed a concentration of 0.4 ppm during any single application and wait a minimum of 10 days between treatments.

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

Weed Species	Metallic Copper Level Required For Control (ppm)
American pondweed ( <i>Potamogeton nodosus</i> ) †	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
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>Potamogeton pectinatus</i> ) †	0.50 - 1.0
Other susceptible submersed species	0.75 - 1.0

† Control generally only in low water hardness.

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

Weed Species	ppm
Duckweed ( <i>Lemna</i> , <i>Landoltia</i> , and <i>Spirodela</i> spp.)	0.75 - 1
Water fern ( <i>Salvinia</i> and <i>Azolla</i> spp.)	0.75 - 1
Water hyacinth ( <i>Eichhornia crassipes</i> )	0.75 - 1
Water lettuce ( <i>Pistia stratiotes</i> )	0.5 - 0.75

† The addition of a surfactant is recommended to improve efficacy on floating plants. Follow surfactant product labeling instructions for application rates and use directions. **Add Komeen and appropriate surfactant to a recommended minimum of 50 gallons of spray solution per surface acre. Use an adequate spray volume to ensure good coverage of the plant.** Do not exceed 3.34 gallons of Komeen per acre foot.

#### 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:

$$\text{Desired concentration of copper (ppm)} \times \text{Average depth of water (feet)} \times 3.34 = \text{Gallons of Komeen per surface acre}$$

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) should be 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 gallon = 4 quarts or 8 pints or 16 cups or 128 fluid ounces
- 1 quart = 2 pints or 4 cups or 32 fluid ounces
- 1 acre = 43,560 square feet
- 1 acre-foot = 43,560 cubic feet = 325,762 gallons = 2,720,000 pounds

TABLE 3

Average Water Depth of Treatment Site (feet)	Gallons of Komeen per Surface Acre to Achieve the Desired Copper Concentration <sup>†</sup>		
	0.5 ppm	0.75 ppm	1.0 ppm
1	1.7	2.5	3.3
2	3.3	5.0	6.6
3	5.0	7.5	10.0
4	6.7	10.0	13.5
5	8.4	12.5	16.7
6	10.0	15.0	20.0
7	11.7	17.5	23.3
8	13.4	20.0	26.7
9	15.0	22.5	30.0
10	16.7	25.1	33.4

<sup>†</sup> For surface applications, dilute Komeen with water in a minimum ratio of 4:1 (Komeen:water). For subsurface applications, no dilution is required.

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

TABLE 4

Average Water Depth of Treatment Site (feet)	Fluid Ounces <sup>1</sup> of Komeen per 1,000 ft <sup>2</sup> to Achieve the Desired Copper Concentration <sup>2</sup>		
	0.5 ppm	0.75 ppm	1.0 ppm
1	5.0	7.3	9.7
2	9.8	14.7	19.3
3	14.7	22.1	29.0
4	19.6	29.4	39.0
5	24.5	36.8	49.0
6	29.4	44.2	58.7
7	34.4	51.5	68.4
8	39.3	58.9	78.4
9	44.2	66.2	88.1
10	49.1	73.6	98.1

<sup>1</sup>: When treating low volumes and measurements in tablespoons is desired, multiply the volume in fluid ounces by 2 to get the volume in tablespoons (one fluid ounce contains two tablespoons).

<sup>2</sup>: For surface applications, dilute Komeen with water in a minimum ratio of 4:1 (Komeen:water). For subsurface applications, no dilution is required.

### METHODS OF APPLICATION

#### Surface Application

Spray Komeen from shore or boat across the surface of the targeted area. Surface applications generally are recommended near shorelines and in shallower waters, and may be made from shore into shallow water.

#### Subsurface Application

In deeper water, it is recommended to make a subsurface application of Komeen at listed rates through weighted trailing hoses in order to deliver spray mix to the water depth of target vegetation. Do not drag hoses on the bottom. Do not exceed 3.34 Gallons of Komeen per acre foot.

#### Adjuvants/Surfactants

Adjuvants or surfactants may be added to Komeen or to a Komeen/water premix to improve efficacy. **Silicone surfactants are not recommended for use on floating plants as they generally can cause the plant to sink causing the spray solution to be washed off the plant.** Adjuvants/surfactants may also enhance performance on other species. Consult the manufacturer's recommendations regarding the use of these products for improved control.

#### Aerial Application

Dilute Komeen with water in a minimum ratio of 4:1 (Komeen:water).

Apply the listed rate of Komeen in a recommended minimum of 10 gallons of total spray solution per surface acre. Add the listed rates of a drift control or sinking agent to the spray solution. Maintain constant agitation during addition of a polymer (except CA – polymers not approved for use with Komeen) and continue throughout the application.

#### Tank Mix

Komeen may be tank mixed with other herbicides for control of a broader weed spectrum. Do not mix concentrates in tank without first adding water. To ensure compatibility, a jar test is recommended before field application. Komeen must not be mixed with any product containing a label prohibition against such mixing and must be used in accordance with the more restrictive of the label limitations and precautions. Do not exceed any label dosage rates.

- **Komeen + Sonar® A.S. Tank Mix** - Komeen can be mixed with Sonar A.S. and applied as a uniform surface spray or injected under the water's surface to enhance the submersed weed control spectrum. For best results, apply Komeen/Sonar A.S. combinations in a 20.4 :1 ratio of Komeen:Sonar A.S. and at a minimum of 0.5 ppm Komeen and 0.03 ppm (30 ppb) Sonar A.S. (e.g. 6.8 Gallons Komeen and 0.324 Gallons Sonar A.S. per acre in waters with average depth of 4 feet). Do not exceed maximum labeled rate for any product. Lower concentrations may be effective on more susceptible species and under certain conditions.
- **Komeen + Diquat Tank Mix** - Komeen can be mixed with diquat (diquat dibromide) for enhanced control of certain weed species including bladderwort, curlyleaf pondweed, leafy pondweed, Richardson pondweed, small pondweed, cattail, elodea, duckweed, water lettuce, Eurasian watermilfoil, floatingleaf pondweed, coontail, salvinia, naiad, sago pondweed, pennywort, hydrilla and water hyacinth. For best results, apply Komeen/diquat (e.g. Littora®, Reward) combinations in a 2:1 ratio of Komeen:Diquat (e.g. 4 gallons Komeen and 2 gallons Littora® per acre in waters with average depth of 4 feet). Do not exceed maximum labeled rates for any product. For hydrilla control and control of other species with high sensitivity to copper, lower rates of Komeen may also enhance the activity of diquat. Komeen must be applied at a minimum of 0.1 ppm in
- **Komeen + Endothall Tank Mix** - Komeen can be mixed with dipotassium salt of endothall and be applied as a uniform surface spray or injected under the water's surface for control of species including naiad, curlyleaf pondweed, elodea, coontail, watermilfoil, water stargrass, eelgrass, *Cladophora*, *Pithophora*, *Spirogyra*, *Chara*, American pondweed and sago pondweed. For best results, apply Komeen/endothall combinations at a minimum rate of 4 gallons Komeen and 3 gallons dipotassium endothall (i.e., Aquathol K, 3 lbs ai/gal/A).

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in a cool dry place. Do not store near feed or foodstuffs. In case of leak or spill, use absorbent materials to contain liquids and dispose in a manner consistent with the pesticide disposal instructions.

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

**Nonrefillable Container Handling (rigid, 5 gallons or less):** Do not reuse or refill this container. Triple rinse container (or equivalent) 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, treatment area, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat the procedure two more times. Then offer for recycling (if available) or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## STORAGE AND DISPOSAL (*continued*)

**Nonrefillable Container Handling (rigid, larger than 5 gal):** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, treatment area, or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling (if available) or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Refillable Container Handling (rigid, larger than 5 gal):** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment, rinsate collection system, or treatment area. Repeat this rinsing procedure two more times. If returning container, seal all openings which have been opened during use. Return the empty container to a collection site designated by SePRO Corporation. If the container has been damaged and cannot be returned according to the recommended procedures, contact SePRO Corporation at 1-800-419-7779 to obtain proper handling instructions.

## TERMS AND CONDITIONS OF USE

If terms of the following *Warranty Disclaimer*, *Inherent Risks of Use* and *Limitation of Remedies* are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, to the extent consistent with applicable law, use by the buyer or any other user constitutes acceptance of the terms under *Warranty Disclaimer*, *Inherent Risks of Use*, and *Limitation of Remedies*.

## WARRANTY DISCLAIMER

SePRO Corporation warrants that the product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, SEPRO CORPORATION MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

## INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of SePRO Corporation or the seller. To the extent consistent with applicable law, all such risks shall be assumed by the buyer.

## LIMITATION OF REMEDIES

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories) shall be limited to, at SePRO Corporation's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

To the extent consistent with applicable law, SePRO Corporation shall not be liable for losses or damages resulting from handling or use of this product unless SePRO Corporation is promptly notified of such losses or damages in writing. In no case shall SePRO Corporation be liable for consequential or incidental damages or losses.

*The terms of the Warranty Disclaimer, Inherent Risks of Use and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of SePRO Corporation or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or Limitations of Remedies in any manner.*

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