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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JAN 31 1996

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

James Yowell
Griffin Corporation
P.O. Box 1847
Valdosta, GA 31603

Dear Mr. Yowell:

Subject: Label Revisions
Komeen Aquatic Herbicide
EPA Registration No. 1812-312
Your Submission Dated January 17, 1996

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. If the Precautionary Statements do not appear on the front panel add the referral statement:

See side panel for additional precautionary statements.

b. Since the application rate tables are deleted, modify application directions so they read similar to the following:

Application rates are calculated by using the following formula to obtain the appropriate copper concentration.

c. Since the label lists 1.0 ppm copper the as the maximum copper level required either delete the statement "Application rates should not result in copper concentrations in excess of 1.0 ppm within treated water" or clarify the statement to indicate not to apply more than 1.0 ppm copper.

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

A stamped copy of the labeling is enclosed for your records.

Sincerely yours,

Theresa A. Stowe

Theresa A. Stowe
Acting Team Leader
Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosure

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01/17/96

ACCEPTED
with COMMENTS
In EPA Letter Dated
JAN 31 1996

KOMEEN®

Aquatic Herbicide

Under the Federal Insecticide, Fundicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 1812-312

Active Ingredient	
*Copper as elemental	8%
Inert Ingredients	92%
Total	100%

* derived from copper-ethylenediamine complex and Copper Sulfate Pentahydrate

One gallon contains 0.8 pounds of elemental copper

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. Areas treated with Komeen may be used for fishing, swimming, drinking and watering livestock immediately after treatment.

CAUTION

KEEP OUT OF THE REACH OF CHILDREN
~~SEE PRECAUTIONARY STATEMENTS AND~~
~~STATEMENT OF PRACTICAL TREATMENT ON BACK PANEL~~

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

IF IN EYES: Flush with plenty of water. Get medical attention if irritation persists.

Net Contents: 2 1/2 Gallons

GRIFFIN CORPORATION
Valdosta, GA 31601

EPA REG. NO. 1812-312
EPA EST. NO. 8901-TX-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed. Avoid contact with skin and eyes. Wash thoroughly with soap and water after handling. Do not apply this product in a manner as to directly expose workers or other persons.

ENVIRONMENTAL HAZARDS

This product may be toxic to fish. Trout and other species of fish may be killed at application rates recommended on this label. Generally, fish toxicity is reduced as water hardness increases. Consult State Fish and Game Agency before applying this product to public waters.

STORAGE AND DISPOSAL

Store in a cool, dry place

PESTICIDE DISPOSAL: Do not contaminate water, food or feed by storage and disposal. Wastes resulting from the use of this product may be disposed of on site or an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

DIRECTIONS FOR USE

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

GENERAL INFORMATION

KOMEEN provides effective control of Hydrilla (Hydrilla verticillata), Brazilian Elodea (Egeria densa), Southern/Northern Naiads (Najas Sp.), Coontail (Ceratophyllum demersum), Elodea (Elodea canadensis), Water Lettuce (Pistia Stratiotes), and Water Hyacinth (Eichhornia crassipes). Under certain water quality conditions, such as low water hardness, KOMEEN may also control Eurasian Watermilfoil (Myriophyllum verticillatum), Sago Pondweed

(Potamogeton pectinatus), Northern Naiads and American Pondweed (Potamogeton nodosus). KOMEEN may be applied to slow moving or quiescent bodies of water including: potable water reservoirs and recreation lakes; golf course, ornamental, fish, and fire ponds.

KOMEEN may be tank mixed with other herbicides, such as Diquat®, Sonar® and Endothall®, for control of a broader weed spectrum (refer to the directions for use for specific directions). Refer to all cautions and precautions of products used with KOMEEN.

The effectiveness of KOMEEN is based upon its penetration into plant tissues; therefore, proper placement of the product is essential. When weeds are actively growing, apply KOMEEN to the area where the greatest concentration of foliage is located in a manner which will deposit the herbicide on leaf surfaces. The activity of KOMEEN may be reduced if silt or algae are present in the water or cover the weeds. If algae is present or covers the weeds, the effectiveness of KOMEEN may be improved by tank mixing with an algicide, such as K-TEA®.

KOMEEN may be applied by aircraft, sprayer or spray boat as a direct surface spray, direct subsurface spray through weighted hoses, invert emulsion, for polymer applications (see specific instructions and use chemicals cleared for application to growing crops) as appropriate. As a surface or subsurface application, Komeen may be diluted or applied directly undiluted, whichever is applicable to ensure uniform coverage of the area to be treated. KOMEEN requires a minimum of 12-24 hours of contact with the target weed in order to provide effective control. The aquatic weeds will drop below the surface within 3-7 days after treatment. Complete effect of the treatment will be observed within 4-6 weeks. In heavily infested areas, a second application after 12 weeks may be necessary.

Undiluted KOMEEN or concentrations above 1.0 ppm Cu^{++} may be injurious to crops, grass, ornamentals and other foliage. Do not apply in such a way that the concentrated product comes in contact with crops, ornamentals, grass or desirable plants. Apply only as specified on the label.

In areas heavily infested with aquatic weeds or if water temperature is high, treatment can result in oxygen loss from decomposition of dead vegetation. This loss can cause fish suffocation. To minimize this hazard, treat 1/3 to 1/2 of the water area in a single operation. Add only enough KOMEEN for the actual area being treated. Wait 10-14 days before treating the remaining area. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas.

Do not apply this product through any type of irrigation system.

Application Rates for Aquatic Weed Control in Quiescent or Slow Moving Water

Weed Pest		Copper Level Required For Control (ppm)*
Hydrilla verticillata (Hydrilla)		0.75 - 1.0
Suppression of Eichhornia crassipes (Water Hyacinth) (Suppression only)		0.75 - 1.0
Egeria densa (Brazilian Elodea)		0.50 - 0.75
Najas Sp. (Southern\Northern Naiads)		0.50 - 1.0
Ceratophyllum demersum (Coontail)		0.50 - 1.0
Elodea canadensis (Elodea)		0.50 - 1.0
Myriophyllum verticillatum (Eurasian Watermilfoil)	**	0.75 - 1.0
Potamogeton pectinatus (Sago Pondweed)	**	0.75 - 1.0
Potamogeton nodosus (American Pondweed)	**	0.75 - 1.0
Pistra stratiotie (Water Lettuce)		0.75 - 1.0

* Use lower rate in light infestations and higher rate for heavier infestations.
** Control only in low water hardness.

~~Gallons of KOMEEN per Acre to Achieve the Desired Copper Content (ppm Cu++)~~

~~Depth of Water (Feet)~~	~~0.50~~	~~0.75~~	~~1.00~~
~~1~~	~~1.67~~	~~2.50~~	~~3.34~~
~~2~~	~~3.34~~	~~5.00~~	~~6.67~~
~~3~~	~~5.00~~	~~7.50~~	~~10.00~~
~~4~~	~~6.67~~	~~10.00~~	~~13.34~~

~~NOTE: To determine the amount of KOMEEN needed to treat a body of water with an average depth not given above, use the follwing calculation:~~

Application rates may be calculated by using the following formula to obtain the appropriate copper concentration.

Desired Concentration of Cu^{++} (ppm) x Ave. Depth of Water (ft) X 3.34 = Gallons Komeen

Application rates should not result in copper concentrations in excess of 1.0 ppm within treated water.

~~Application Rates for Static or Minimal Flowing Water Situations~~

	~~Gallons Per Surface Acre~~
~~Hydrilla verticillata~~	~~8-16~~
~~Egeria (Brazilian elodea)~~	~~6-12~~
~~Southern\Northern Naiads~~	~~6-12~~

~~Use lower rates in shallow water (1-3 feet) and for light infestations. Use higher rates for deeper water and for heavier weed infestations.~~

METHODS OF APPLICATION

SPRAY BOAT

Direct Surface Application: Surface applications may be made near shorelines or in shallow water (4 feet or less).

Direct Subsurface Application: In deep water (4 feet or more), make a subsurface application of KOMEEN at recommended rates through weighted trailing hoses where the greatest concentration of foliage exists, and where deposit on leaf surfaces will be assured. Do not drag hoses on the bottom.

Invert Application: KOMEEN will invert easily using either tank mix or bi-fluid mixer techniques. Invert applications should be made through weighted hoses dragged below the surface of the water. The invert emulsion will form tiny droplets which will adhere to the submerged vegetation and release the herbicide in close proximity to the plant. Do not drag hoses on the bottom.

The emulsifier should release KOMEEN at a rate fast enough to be quickly absorbed by the plant tissue but not so fast that it can be washed away from the treatment area. The invert emulsion has a heavy viscous consistency much like mayonnaise.

Apply KOMEEN in an appropriate invert system. The ratios given below should be used only as a guide in the preparation of a KOMEEN invert emulsion. It is best to test the invert system to be used prior to application to ensure proper results. The tightness and weight of the invert may be altered by slight changes in the suggested ratios.

Approximate ratios for tank mix systems:
80 gallons water : 3 gallons invert oil : 8 gallons KOMEEN.

Approximate ratios for bi-fluid mixer systems:
60 gallons water : 3 gallons invert oil : 16 gallons KOMEEN.

For heavy growth, invert application may result in streaking effect due to localized control where the hoses were drug. For those areas, a direct application is preferred. Repeating an application of KOMEEN to a treated area within a short time after the first treatment may not increase effectiveness.

Polymer Application: A polymer may be added to KOMEEN or a KOMEEN/Water premix to improve sinking, deposition and retention of the spray. Consult the manufacturer's recommendations regarding the use of a polymer for improved aquatic weed control.

SPRAY EQUIPMENT

Direct Surface Application: Surface application may be effective near shorelines or in shallow water.

Polymer Application: Apply the recommended rate of KOMEEN in 100-400 gallons of total spray solution per surface acre. Add the recommended rate of sinking agent to the spray solution. Maintain constant agitation during addition of the polymer and continue through application. The polymer adheres to KOMEEN and forms strings that sink and stick to the aquatic vegetation. When treating slow moving water, the spray rig should move at a slow pace (4-5 mph) counter to the flow of water. Apply the spray solution to the area of densest foliage.

AIRCRAFT APPLICATION

Polymer Application: Apply the recommended rate of KOMEEN in 20 gallons of total spray solution per surface acre. Add the recommended rates of a drift control or sinking agent to the spray solution. Maintain constant agitation during addition of the polymer and continue through application. When treating slow moving water, apply the spray solution counter to the flow of water.

TANKMIX

KOMEEN + Diquat Tankmix: KOMEEN can be mixed with Diquat (Diquat dibromide (1,2-a:2'1'-c) pyrazinediium dibromide 35.3%) and be applied by helicopter for control of Bladderwort, Curlyleaf Pondweed, Leafy Pondweed, Richardson Pondweed, Small Pondweed, Cattail, American Elodea, Duckweed, Water lettuce, Eurasian Watermilfoil, Floatingleaf Pondweed, Coontail, Common Salvinia, Southern Naiad, Slender Naiad, Sago Pondweed, Pennywort, Hydrilla and Water Hyacinth in accordance with the more restrictive of the label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Mix 20 gallons of KOMEEN with 10 gallons of Diquat and 2 gallons of Nalquatic® per 100 gallons of water. Apply at the rate of 20 gallons per acre

(equivalent of 4 gallons KOMEEN, 2 gallons Diquat and 0.4 gallons Nalquatic® per surface acre). Algae on the plant surface may interfere with uptake of herbicides; therefore, use K-TEA algicide prior to this application to remove excess algae and improve control.

KOMEEN + Endothall Tankmix: KOMEEN can be mixed with Endothall [(Dipotassium salt of Endothal 10.1 - 40.3%) or (mono(N,N-dimethylalkylamine salt of endothall 53.0%0]and be applied as a uniform surface spray or injected under the waters surface for control of Najas Elodea, Coontail, Potamogeton, Milfoil, Zannichellia, Vallisneria, Cladophora, Pithophora, Spirogyra, Chara, American Pondweed and Sago Pondweed in accordance with the more restrictive of the label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Mix 20 gallons of KOMEEN with 15 gallons of Endothall in 100 gallons of water. Apply at the rate of 20 gallons per surface acre (equivalent to 4 gallons KOMEEN, 3 gallons Endothall). Algae on the plant surface may interfere with uptake of herbicides; therefore, use K-TEA algicide prior to this application to remove excess algae and improve control.

KOMEEN + Sonar A.S. Tankmix: KOMEEN can be mixes with Sonar A. S. (fluridone 41.7%) and be applied as a uniform surface spray or injected under the waters surface for control of Common duckweed, Spatterdock, Bladderwort, Fanwort (Cabomba), Watermilfoil, Paragrass, Common Elodea, Brazilian Elodea, Najas Elodea, Naiad, Coontail, American Pondweed and Sago Pondweed in accordance with the more restrictive of the label limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Mix 20 gallons of KOMEEN with 1.5 quarts of Sonar A.S. in 100 gallons of water. Apply at the rate of 20 gallons per surface acre (equivalent to 4 gallons KOMEEN, 0.3 quarts Sonar A.S.). Algae on the plant surface may interfere with uptake of herbicides; therefore, use K-TEA algicide prior to this application to remove excess algae and improve control.

WARRANTY STATEMENT

GRIFFIN warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of GRIFFIN. In no case shall GRIFFIN be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. The

exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or at Griffin Corporation's election, the replacement of this product. GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.