

Hydrothol 191

AQUATIC ALGICIDE AND HERBICIDE

ACTIVE INGREDIENT:

Mono(N,N-dimethylalkylamine**) salt of endothall* 53.0%

OTHER INGREDIENTS:

47.0%

TOTAL

100.0%

Contains 2 lb. endothall* per gallon

*7-oxabicyclo [2.2.1] heptane-2,3-dicarboxylic acid equivalent 23.36%

**Alkyl groups as derived from Coconut Oil

KEEP OUT OF REACH OF CHILDREN
DANGER

FIRST AID

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. If person is unconscious, do not give anything by mouth and do not induce vomiting.

IF ON SKIN, wash with plenty of soap and water. Get medical attention.

IF IN EYES, hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

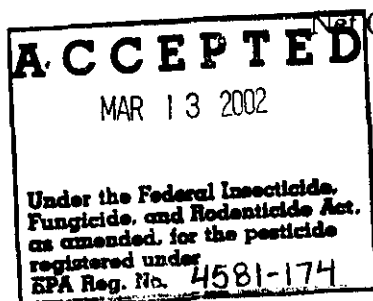
IF INHALED, remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

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DIRECTIONS FOR USE

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

GENERAL INFORMATION

HYDROTHOL 191 is a liquid concentrate soluble in water and is a highly effective aquatic herbicide and algicide for use in irrigation and drainage canals, lakes and ponds. Apply when weeds and algae are actively growing. Note: Susceptibility of algae may vary due to subspecies, strains or environmental conditions. Dosage rates are measured in parts per million (ppm) endothall acid.

Necessary approval and/or permits should be obtained in states where required. Consult state water or conservation authorities before applying to public waters or to ponds, canals or streams which flow into public waters.

LAKES AND PONDS

Algae Control: Hydrothol 191 is effective on a broad range of planktonic, filamentous, and branched algae. Note: Susceptibility of algae may vary due to subspecies, strains or environmental conditions. Generally rates of 0.05 to 0.3 ppm (0.6-3.6 pints per acre foot) are effective for the control of algae. Repeat applications when algae reappears and reaches treatment levels. Dosages may be increased (from 0.3 to 1.5 ppm) where greater longevity of control is desired or to improve efficacy on species that prove difficult to control. Due to the potential for fish toxicity at higher rates, it is suggested that applications above 0.3 ppm be made only by commercial applicators as marginal or sectional treatments.

Submerged Aquatics: Apply Hydrothol 191 at 0.7 gallons to 4.0 gallons per acre foot (0.5 to 3.0 ppm) for control of aquatic weeds. Hydrothol 191 is effective on a broad range of aquatic weeds including: Hydrilla, Hygrophila*, Naiad, Elodea canadensis, Cabomba*, Coontail, Bur Reed*, Milfoil, Pondweed (Potamogeton spp.), Vallisneria, Zannichellia and Water Stargrass*. Due to the toxicity to fish, the use of HYDROTHOL 191 for submerged aquatic weeds is suggested only by commercial applicators on a marginal or sectional rather than overall type treatment. Use dosages over 1.0 ppm only on very narrow margins or in areas where some fish kill is not objectionable. Do not treat more than 1 / 10 of the lake or pond at one time with doses in excess of 1.0 ppm.

* Not for this use in California

Rate Of Application

Algae or Weed	Rate (ppm)	Amount per Acre Ft
Algae Planktonic Filamentous Branched (For use in California only on Cladophora, Pithophora, Spirogyra, Chara)	0.05-1.5 ppm	0.6-18.0 pints
Bur Reed*	2-3 ppm	2.7-4.0 gal.
Cabomba*	2-3 ppm	2.7-4.0 gal.
Coontail	0.5-1.5 ppm	0.7-2.1 gal.
Elodea canadensis	2-3 ppm	2.7-4.0 gal.
Hydrilla	1-2 ppm	1.4 - 2.7 gal.
Hygrophila*	2-3 ppm	2.7-4.0 gal.
Milfoil	1-2 ppm	1.4 -2.7 gal.
Naiad (Najas spp.)	1-1.5 ppm	1.4-2.1 gal.
Pondweed (Potamogeton spp.)	0.5-2 ppm	0.7-2.7 gal.
Water Stargrass*	2-3 ppm	2.7-4.0 gal.
Vallisneria	2-3 ppm	2.7-4.0 gal.
Zannichellia	1-2 ppm	1.4-2.7 gal.

* Not for this use in California

IRRIGATION AND DRAINAGE CANALS

Apply HYDROTHOL 191 as a surface spray with uniform coverage or inject under the surface of the water. The minimum contact time with weeds for optimum results should be two hours.

Rate of Application: Irrigation and Drainage Canals

Algae controlled: planktonic, filamentous and branched algae (For use in California only on Cladophora, Pithophora, Spirogyra, Chara). Submersed aquatic plants controlled: Hydrilla, Hygrophila*, Naiad, Elodea canadensis, Cabomba*, Coontail, Bur Reed*, Milfoil, Pondweed (Potamogeton spp.), Vallisneria, Zannichellia and Water Stargrass. Due to fish toxicity, application utilizing rates higher than 0.3 ppm should be made by commercial applicators only.

HEAVY INFESTATION---Apply at rate of 4.0 to 6.75 gal. per acre foot (equivalent to 3.0-5.0 ppm). See table below.

MODERATE OR LIGHT INFESTATIONS---Apply at rate of 1.4 to 2.7 gal. per acre foot (equivalent to 1.0-2.0 ppm). See table below.

GALLONS OF HYDROTHOL 191 REQUIRED TO TREAT 1 MILE OF DITCH, 1 FOOT DEEP**WIDTH OF DITCH OR CANAL IN FEET**

ppm	4	6	8	10	12	14	16	18	20	22
1.0	0.7	1.0	1.3	1.7	1.9	2.3	2.6	2.9	3.3	3.6
2.0	1.3	2.0	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2
3.0	2.0	2.8	3.9	4.9	5.9	6.8	7.8	8.8	9.8	10.8
4.0	2.6	3.9	5.2	6.6	7.8	9.1	10.4	11.8	13.1	14.4
5.0	3.2	4.9	6.5	8.2	9.7	11.5	13.1	14.7	16.4	18.0

Note: 1.1 pint HYDROTHOL 191 per acre foot equals 0.1 ppm of endothall (acid).

APPROXIMATE QUANTITY OF HYDROTHOL 191 FOR ONE ACRE* TREATMENT**DOSAGES FOR VARIOUS CONCENTRATIONS IN PPM**

DEPTH	0.05	0.1	0.2	0.3	0.5	0.8	1.0	2.0	5.0
1 ft.	0.6 pts	1.1 pts	2.2 pts	0.4 gal	0.7 gal	1.1 gal	1.4 gal	2.7 gal	6.8 gal
2 ft.	1.1 pts	2.2 pts	4.3 pts	0.8 gal	1.4 gal	2.2 gal	2.8 gal	5.4 gal	13.6 gal
4 ft.	2.2 pts	4.3 pts	8.6 pts	1.6 gal	2.7 gal	4.4 gal	5.4 gal	10.9 gal	27.2 gal
6 ft.	3.3 pts	6.5 pts	12.9 pts	2.5 gal	4.1 gal	6.5 gal	8.2 gal	16.3 gal	40.8 gal

*One acre equals approximately 208' times 208'

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

DANGER

CORROSIVE, CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN BURNS. MAY BE FATAL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. WEAR PROTECTIVE CLOTHING, RUBBER GLOVES, AND GOGGLES OR FACE SHIELD WHEN HANDLING. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse. Do not breathe vapor or spray mist.

ENVIRONMENTAL HAZARDS

Fish may be killed by dosages in excess of 0.3 ppm.

Avoid contact with or drift to desirable plants or crops as injury may result.

Clean out application equipment after each operation.

Do not use fish from treated areas for food or feed within three days after treatment.

Do not use water from treated areas for watering livestock, for preparing agricultural sprays for food crops, for irrigation, or for domestic purposes within the following periods:

Up to 0.3 ppm--- 7 days after application

Up to 3.0 ppm---14 days after application

Up to 5.0 ppm---25 days after application

STORAGE AND DISPOSAL

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

Storage Instructions: Store in the original container. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. In the event of spillage during handling or storage, absorb with sand or other inert material and dispose of absorbent in accordance with the Pesticide Disposal Instructions listed below.

Pesticide Disposal Instructions: 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 Instructions: Triple rinse (or equivalent). Then offer for recycling 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.

WARRANTY AND DISCLAIMER

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