



# HYDROTHOL<sup>®</sup> 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 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.
- Call a poison control center or doctor for treatment advice.

**IF INHALED:**

- Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- 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 by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

**IF ON SKIN:**

- 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.

**HOT LINE NUMBER:** Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact (866) 673-6671 for emergency medical treatment information.

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

EPA Registration No. 70506-175      EPA Establishment No. 62171-MS-003

Net Contents: 2.5 Gallons

Sold by:  
 **United Phosphorus, Inc.**  
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 King of Prussia, PA 19406  
 1-800-438-6071 • www.upi-usa.com

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

## DANGER

CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN BURNS. MAY BE FATAL IF SWALLOWED, OR ABSORBED THROUGH SKIN. HARMFUL IF INHALED. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. AVOID BREATHING VAPOR OR SPRAY MIST. WEAR PROTECTIVE CLOTHING, RUBBER GLOVES, AND GOGGLES OR FACE SHIELD WHEN HANDLING. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove contaminated clothing and wash before reuse.

### 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. Not for use in brackish or salt water. 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

## 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) endo-thall 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 reappear and reach 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, Hygrophi-la\*, 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 objectional. 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: LAKES AND PONDS

Algae or Weed	Rate (ppm)	Amount per Acre Ft.
Algae Planktonic Filamentous Branched (Use in California limited to Gladophora, 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.
Hygrophi-la*	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 (Use in California limited to Cladophora, Pithophora, Spirogyra, Chara). Submerged 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, applications utilizing rates higher than 0.3 ppm should be made by commercial applicators only.

\*Not for this use in California

**HEAVY INFESTATION**—Apply at a 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 a 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

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

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

### APPROXIMATE QUANTITY OF HYDROTHOL 191 FOR ONE ACRE\* TREATMENT

Depth	Dosages for Various Concentrations in PPM								
	0.05	0.1	0.2	0.3	0.5	0.8	1.0	2.0	5.0
<b>1 ft.</b>	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
<b>2 ft.</b>	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
<b>4 ft.</b>	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
<b>6 ft.</b>	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' x 208'

## STORAGE AND DISPOSAL

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

**Pesticide 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.

## EMERGENCY TELEPHONE NUMBERS:

**CHEMTREC: (800) 424-9300**

**MEDICAL: (866) 673-6671 Rocky Mountain Poison Control Center**

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials, resistant strains or other influencing factors in the use of the product. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc., Manufacturer and Seller harmless for any claims relating to such factors. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND MANUFACTURER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

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