

# HYDROTHOL® 191

NET GAL.

Contains 2 lb. Endothal\* per gallon

## ACTIVE INGREDIENT

Mono [N,N-dimethylalkylamine\*\*] salt of Endothal\*

## INERT INGREDIENTS:

TOTAL

53.0%  
47.0%  
100.0%

\*7-oxabicyclo (2.2.1) heptane-2,3-dicarboxylic acid equivalent 23.36%

\*\*Alkyl groups as derived from Coconut Oil  
U.S. Patent 2,900,411

## WARNING

SEE SPECIFIC WARNING AND CAUTION STATEMENTS ON SIDE PANEL

KEEP OUT OF REACH OF CHILDREN

USDA Registration No. 4581-174



AGRICULTURAL CHEMICALS DIVISION

PENNSALT CHEMICALS CORPORATION

TACOMA, WASHINGTON

AURORA, ILL.

MONTGOMERY, ALA.

BRYAN, TEXAS

PHILADELPHIA, PA.

FRESNO, CALIF.

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

Depth	Dosage for various concentrations in ppm								
	0.05	0.1	0.2	0.3	0.5	0.8	1.0	2.0	2.5
1 ft.	.6 pts	1.1 pts	2.2 pts	.4 gal	.7 gal	1.1 gal	1.4 gal	2.7 gal	3.4 gal
2 ft.	1.1 pts	2.2 pts	4.3 pts	.8 gal	1.4 gal	2.2 gal	2.8 gal	5.4 gal	6.8 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	13.6 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	20.4 gal

\*one acre equals approximately 208 x 208

## CAUTION

Fish will be killed by dosages in excess of 0.3 ppm. Do not use where fish are important resources.

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

Do not store this material where it may contaminate seeds, feeds or foodstuffs.

Clean out applicator after each operation.

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

Do not use treated water for watering livestock or 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

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.

## WARNING

May be fatal if swallowed. Irritating to skin, nose, eyes, and throat. May be absorbed through skin. Do not get in eyes, on skin, or on clothing. In case of skin contact, immediately flush skin or eyes with plenty of water for at least 15 minutes; for eyes get medical attention. If swallowed, give cold milk or cold water. Call a doctor immediately. Bathe and change clothing at least daily while using.

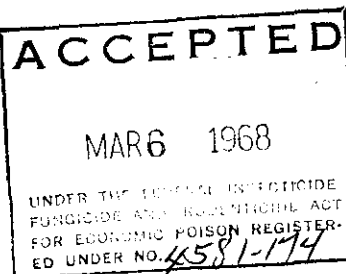
## NOTICE

Pennsalt Chemicals Corporation warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the risks referred to therein. Pennsalt Chemicals Corporation makes no other express or implied warranty, including any other express or implied warranty of FITNESS or MERCHANTABILITY, and no agent of Pennsalt Chemicals Corporation is authorized to do so except in writing, with a specific reference to this warranty. Any damages arising from a breach of this warranty shall be limited to direct damages, and shall not include consequential commercial damages such as loss of profits or values.

MADE IN U.S.A.

5523603

PRINTED IN U.S.A.



8.57 lbs/gal Product  
4.54 lbs salt/gal  
2.0 lbs acid/gal

4581-174

03/06/1968

1/2

### GENERAL INFORMATION

Hydrothol 191 is a liquid concentrate soluble in water and is a highly effective aquatic herbicide and algacide for use in irrigation and drainage canals, lakes and ponds to control the following weeds and algae: Naias, Elodea, Coontail, Potamogeton, Milfoil, ~~Zanichella~~, Vallisneria, Cladophora, Pithophora, Spirogyra and Chara when the weeds are actively growing. Dosage rates indicated are measured in "Parts Per Million" (ppm). 1 ppm as a dosage rate means that there would be 1 part endothall (acid) in 1,000,000 parts of water.

### IRRIGATION AND DRAINAGE CANALS

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

**HEAVY INFESTATION**—Apply at rate of 4.0 to 6.75 gal. per acre foot (equivalent to 3-5 ppm). See table below.

**MODERATE TO LIGHT INFESTATION**—Apply at rate of 1.4 to 2.7 gal. per acre foot (equivalent to 1-2 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									
		4	6	8	10	12	14	16	18	20	22
1 ppm	.7	1.0	1.3	1.7	1.9	2.3	2.6	2.9	3.3	3.6	
2 ppm	1.3	2.0	2.6	3.3	3.9	4.6	5.2	5.9	6.5	7.2	
3 ppm	2.0	2.8	3.9	4.9	5.9	6.6	7.8	8.8	9.8	10.8	
4 ppm	2.6	3.9	5.2	6.6	7.8	9.1	10.4	11.8	13.1	14.4	
5 ppm	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).

Do not use treated water for irrigation of crops.

### LAKES AND PONDS

**ALGAE CONTROL:** Cladophora, Pithophora, Spirogyra, and Chara can be controlled with applications of .6 to 2.2 pints per acre foot (0.05 to 0.2 ppm) applied as a uniform surface spray or injected under water surface. Pithophora may require 0.2 ppm or higher. Dosages may be increased to .4 to 1.1 gals. (to .8 ppm) where greater longevity of control is desired and for marginal treatments. Repeat treatments when algal growth reappears.

**SUBMERGED AQUATICS:** 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 over-all type treatment. Use .7 to 3.4 gals. per acre foot (0.5 to 2½ ppm) on a marginal treatment either sprayed on or injected below the surface. Use dosages over 1 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 at one time with doses in excess of 1 ppm.