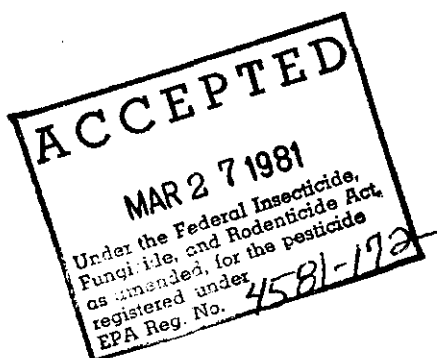


4581-172

03/27/1981

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HYDROTHOL 191
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HYDROTHOL 191®

GRANULAR AQUATIC ALGICIDE AND HERBICIDE

ACTIVE INGREDIENT

Mono(N,N-dimethylalkylamine*)salt of Endothall** 11.2%

INERT INGREDIENTS 88.8%

TOTAL 100.0%

*Alkyl groups as derived from Coconut Oil

**7-oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid equivalent 5%

U.S. Patent 3,246,015;3,207,593

FOR AGRICULTURAL, PROFESSIONAL AND SERVICEPERSON USE ONLY

WARNING

KEEP OUT OF REACH OF CHILDREN

See Additional Precautionary Statements On Panel Below

EPA Registration No. 4581-172

EPA Establishment No. 228-IL-1

Lbs. Net Weight

AGCHEM DIVISION-PENNWALT CORPORATION

Fresno, CA Philadelphia, PA

GENERAL INFORMATION

HYDROTHOL 191 Granular is a highly effective algicide and aquatic weed killer for use in irrigation and drainage canals, lakes and ponds to control the following weeds and algae: *Najas*, *Elodea*, Coontail, *Potamogeton*, Milfoil sp., *Zannichellia*, *Vallisneria*, *Cladophora*, *Spirogyra*, *Pithophora* and *Chara*, when 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

HEAVY INFESTATIONS—Evenly spread 160 to 270 lbs. HYDROTHOL 191 Granular per acre foot of water (3 to 5 ppm) with suitable aerial or ground equipment.

MODERATE OR LIGHT INFESTATIONS—Use 55 to 110 lbs. per acre foot HYDROTHOL 191 Granular (1 to 2 ppm) applied evenly.

Pounds of HYDROTHOL 191 Granular required per mile of canal or swath, 1 ft. deep.

WIDTH OF CANAL, DITCH OR SWATH					
ppm	10	15	20	30	40
0.5	33	49	65	95	130
1.0	65	98	130	190	260
2.0	130	195	260	380	520
3.0	195	294	390	570	780
4.0	260	392	520	760	1040
5.0	325	490	650	950	1300

Note: 5.5 lbs. 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 by even applications of 3 lbs. to 11 lbs. HYDROTHOL 191 Granular per acre foot (0.05 to 0.2 ppm) applied by suitable air or water equipment. HYDROTHOL 191 Granular is especially effective on bottom growth control. *Pithophora* may require 0.2 ppm or higher. Dosages may be increased to 27-82 lbs. of HYDROTHOL 191 Granular (.5 to 1.5 ppm) where greater longevity of control is desired and for marginal treatments. For floating mats HYDROTHOL 191 Granular should be scattered as evenly as possible over the mat. Repeat treatments when algal growth reappears.

SUBMERGED AQUATICS—Due to the toxicity to fish, the use of HYDROTHOL 191 Granular for submerged aquatics is suggested only by commercial applicators on a marginal or sectional treatment basis. Use 27 to 136 lbs. HYDROTHOL 191 Granular per acre foot (0.5 to 2.5 ppm) scattered evenly as possible. Use dosages over 1 ppm on 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 ppm.

Approximate pounds of HYDROTHOL 191 Granular for one acre* treatment at various depths and ppm concentrations.

Depth	PPM Concentrations							
	.05 ppm	0.1 ppm	0.2 ppm	0.5 ppm	1.0 ppm	1.5 ppm	2.5 ppm	
1 ft.	3	5	11	27	54	82	136	
2 ft.	5	11	22	54	109	163	272	
4 ft.	11	22	44	109	217	326	544	
6 ft.	16	33	65	163	326	489	815	

*One acre equals approximately 208' x 208'

PRECAUTIONS

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, feed 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. Do not reuse containers. Destroy when empty.

Hydrothol 191 Granular
EPA Reg. No. 4581-172

DIRECTIONS FOR USE IN CALIFORNIA ONLY

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

HYDROTHOL 191 GRANULAR is a formulation of a submersed aquatic weed killer for use in rice fields to control Southern Naiad (*Najas guadalupensis*), American Pondweed (*Potamogeton nodosus*), Horned Pondweed (*Zannichellia palustris*), Sago Pondweed (*Potamogeton pectinatus*), and Coontail (*Ceratophyllum demersum*).

TIME OF APPLICATION

Apply 25 to 60 days after sowing, when aquatic weeds are present. Do not apply before rice emerges above surface of water. Do not apply after rice starts heading. Do not apply HYDROTHOL 191 GRANULAR more than once yearly.

RATE OF APPLICATION

The ideal average depth of water at time of application is 6 to 8 inches; however, based on depth, use rates as follows:

Depth of Water in Inches	Lbs. HYDROTHOL 191 GRANULAR Per Acre	ppm Acid Equivalent
4-6	40	2.2-1.5
6-8	50	1.9-1.4
8-10	60	1.7-1.4

APPLICATION EQUIPMENT

Apply with ground or air equipment designed for uniform distribution of granules. Clean out application equipment after each use.

Necessary approval and/or permits should be obtained if required. Consult State Fish and Game agencies before applying this product.

CAUTION

Do not release water from flooded fields within 10 days of application. Carefully read regular product label and follow appropriate precautions and directions.

PENNWALT

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Columbus, OH

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