



**Material Safety Data Sheet**

**United Phosphorus, Inc.**

<b>NFPA</b>	<b>PPE</b>		

Issued Date 07-Feb-2007

Revision Date 08-Nov-2007

Revision Number: 2

**12-174 - Hydrothol® 191 Aquatic algicide and herbicide**

**1. PRODUCT AND COMPANY IDENTIFICATION**

**UPI**  
630 Freedom Business Center  
Suite 402  
King of Prussia, PA 19406

**Emergency Telephone Number**  
Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887  
Medical: Rocky Mountain Poison Control Center  
(866) 673-6671 (24hrs)

<u>Company Information</u>	<u>Contact Information</u>	<u>Phone Number</u>	<u>Available Hrs</u>
UPI	Customer Service R&D Technical Service	1-800-438-6071 610-878-6100	8:00 am to 5:00 pm EST 8:00 am - 5:00 pm (EST)

<b>Product Name</b>	Hydrothol® 191 Aquatic algicide and herbicide
<b>EPA Reg #</b>	70506-175
<b>Recommended Use</b>	Aquatic herbicide algicide
<b>Product Code</b>	12-174

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**  
Causes irreversible eye damage  
May be fatal if swallowed.  
May be fatal if absorbed through skin  
Harmful by inhalation  
Causes severe skin irritation

**DANGER!**  
**Appearance** Dark yellow, Light brown.      **Physical State** Liquid.      **Odor** Slight chlorine.

**Potential Health Effects**

- Inhalation
  - Skin contact
- |                                    |   |
|------------------------------------|---|
| <p><b>Eyes</b><br/><b>Skin</b></p> | <p>Risk of serious damage to eyes. Causes irreversible eye damage..<br/>Severely irritating to the skin. Prolonged contact can result in redness and blistering of skin..</p> |
| <p><b>Inhalation</b></p>           | <p>Slightly toxic if inhaled.</p>   |

Ingestion

Toxic if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Mono(N,N-diethylalkylamine) salt of endothall	66330-88-9	53	N/A

### 4. FIRST AID MEASURES

#### Eye Contact

Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye.  
Call a poison control center or doctor for treatment advice.

#### Skin Contact

Take off contaminated clothing.  
Rinse skin immediately with plenty of water for 15-20 minutes.  
Call poison control center or doctor for treatment advice.

#### Inhalation

Move person to fresh air.  
If person is not breathing, call 911 or an ambulance, then give artificial respiration.  
Call a poison control center or doctor for further treatment advice.

#### Ingestion

Call a physician or Poison Control Centre immediately  
Have person sip a glass of water if able to swallow  
Do not induce vomiting unless told to do so by a poison control center or doctor  
Never give anything by mouth to an unconscious person

#### Notes to Physician

No information available  
Treat symptomatically

### 5. FIRE-FIGHTING MEASURES

#### Flammable Explosive Properties

##### Flash Point

> 100°C

##### Autoignition Temperature

Not available

##### Flammability Limits in Air

Not available

##### Extinguishing Media

Use: Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Dry chemical.

##### Fire/Explosion Hazard

Firefighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear and self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

##### Hazardous Combustion Products

Extreme temperatures convert Endothall product to endothall anhydride which is a strong vesicant causing blistering of eyes, mucous membranes and skin.

**NFPA**

**Health 4**

**Flammability 1**

**Instability 1**

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Avoid contact with skin, eyes and clothing. Use personal protective equipment.
<b>Environmental Precautions</b>	Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.. Do not flush into surface water or sanitary sewer system.
<b>Methods for Clean-up</b>	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

## 7. HANDLING AND STORAGE

<b>Handling</b>	Keep out of reach of children. Empty containers may contain hazardous residues. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. .
<b>Storage</b>	Keep from freezing.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>Exposure Guidelines</b>	This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
<b>Engineering Controls</b>	Investigate engineering techniques to reduce exposures. Local mechanical exhaust ventilation is preferred. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems. .
<b>Personal Protective Equipment</b>	
<b>Eye/face Protection</b>	Goggles. Avoid contact with eyes.
<b>Skin Protection</b>	Rubber gloves. Wear protective gloves/clothing.
<b>Respiratory Protection</b>	Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus. Respiratory protection programs must comply with 29 CFR 1910.134. .

### General Hygiene Considerations

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Dark yellow Light brown	<b>Odor</b>	Slight chlorine
<b>Physical State</b>	Liquid	<b>pH</b>	No data available
<b>Boiling Point/Range</b>	100°C	<b>Melting Point/Range</b>	Not available
<b>Specific Gravity</b>	1.44 @25 C	<b>Solubility</b>	>50 g/100 ml
<b>Evaporation Rate</b>	Not available	<b>Vapor Pressure</b>	9.45 X 10 <sup>-6</sup> Torr(Salt)
<b>Vapor Density</b>	Not available	<b>VOC Content</b>	Not available
<b>Viscosity</b>	100 cps@ 25 C	<b>Molecular Weight</b>	No data available
<b>Bulk Density</b>	No data available	<b>Percent Solids</b>	Not available
<b>Percent Volatiles</b>	47%		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions
------------------	--------------------------------

<b>Conditions to Avoid</b>	Extreme temperatures.
<b>Incompatible Materials</b>	No materials to be especially mentioned
<b>Hazardous Decomposition Products</b>	Extreme temperatures may convert endothall product to endothall anhydride, a strong vesicant, causing blistering of eyes, mucous membranes and skin. .
<b>Possibility of Hazardous Polymerization</b>	Hazardous polymerisation does not occur

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Product Information

Single exposure studies indicate:

Oral - Moderately toxic to rats (LD50 233.4 mg/kg)

Dermal - Moderately toxic to rabbits (LD50 480.9 mg/kg)

Inhalation - Slightly toxic to rats (4 hr LC 50 0.7 mg/l)

Skin irritation - Severely irritating to rabbits

Eye irritation - severely irritating to rabbits

No skin allergy was observed in guinea pigs following repeated exposure.

Endothall

Intentional swallowing of 40 ml led to death within 12 hours. Skin allergy was observed in guinea pigs following repeated exposure. Repeated dietary administration (Via gelatin capsules) produced vomiting, diarrhea, sluggish movements, and liver, kidney and blood effects in dogs. Long-term dietary administration to rats and mice produced effects in the glandular stomach. High mortality rates and intestinal tumors considered to be secondary to the effects in the stomach were observed in mice. Long-term application to the skin of mice produced no tumors. No birth defects were observed in the offspring of rats exposed orally during pregnancy, even at dosages that produced adverse effects on the mothers. Skeletal abnormalities were observed in the offspring of rabbits and mice exposed during pregnancy, but only at dosages that produced adverse effects in the mothers. No genetic changes were observed in tests using bacteria, animal cells or animals.

### Chronic Toxicity

There are no known carcinogenic chemicals in this product

### Carcinogenicity

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

This material is highly toxic to Daphnia magna (48 hr LC50 0.36 mg/l), fathead minnow (96 hr LC50 0.94 mg/l, golden shiner (120 hr LC50 0.32 mg/l) and scud (96 hr TL50 0.48 mg/l). It is moderately toxic to mussels (48 hr LC50 4.85 mg/l) and rainbow trout (96 hr LC50 1.7 mg/l). The 7 day LC50 for Ceriodaphnia was 0.18-0.19 mg/l and 0.304 mg/l for fathead minnow. . Material is slightly toxic to bluegill sunfish( 96 hr LC50 77 mg/l), rainbow trout (96-hr LC50 0.94 mg/l) Daphnia magna(48 hour LC50 92 mg/l) eastern oysters(96 hr LC50 54 mg/l) mysid shrimp (96 hr LC50 39 mg/l) and fiddler crab (96 hr LC50 85.1 mg/l) It is practically non-toxic to sheepshead minnow(96 hr LC50 110 mg/l) and common mummichog ( 96 hr LC50 213.9 mg/l). .

Chem Fate: Active ingredient (technical) -

No degradation was observed in irradiated or dark water during a 30-day test period at pH 7 or 9. Rapid degradation was observed in irradiated, but not dark, water at pH 5 (Half-life <24 hours). This material adsorbed readily from aqueous solution on to Crosby silt loam. It is not expected to bioaccumulate with bioaccumulation factors (BCF) of 10 for mosquito fish and 0.003- 0.008 for bluegills..

## 13. DISPOSAL CONSIDERATIONS

#### Waste Disposal Method

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or 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. .

**Contaminated Packaging**

Empty containers should be taken for local recycling, recovery or waste disposal.

<b>14. TRANSPORT INFORMATION</b>
----------------------------------

**DOT**

<b>Proper Shipping Name</b>	Pesticides, liquid, toxic, n.o.s. (Endothal)
<b>Hazard Class</b>	6.1
<b>UN-No</b>	2902
<b>Packing Group</b>	PG III
<b>Reportable Quantity (RQ):</b>	1,000 lbs (endothall)

**ICAO**

<b>UN-No</b>	2902
<b>Proper Shipping Name</b>	Pesticide, liquid, toxic, n.o.s. (Endothall)
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	PG III

**IATA**

<b>UN-No</b>	2902
<b>Proper Shipping Name</b>	Pesticide, liquid, toxic, n.o.s. (Endothall)
<b>Hazard Class</b>	6.1
<b>Packing Group</b>	PG III
<b>ERG Code</b>	6 L

**IMDG/IMO**

<b>Proper Shipping Name</b>	Pesticide, liquid, toxic, n.o.s. (Endothall)
<b>Hazard Class</b>	6.1
<b>UN-No</b>	2902
<b>Packing Group</b>	PG III
<b>EmS No.</b>	F-A, S-A

<b>15. REGULATORY INFORMATION</b>
-----------------------------------

**International Inventories****USA****Federal Regulations****SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazardous Categorization**

<b>Chronic Health Hazard</b>	No
<b>Acute Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	No

**Clean Water Act****Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any HAPs.

**CERCLA****RCRA****Pesticide Information****State Regulations****California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know  
International Regulations**

**Mexico - Grade**

Not available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

Not determined

<b>16. OTHER INFORMATION</b>
------------------------------

**Revision Date**

08-Nov-2007

**Revision Summary**

Update logo Add information on previous EPA registration number

**Miscellaneous**

UPI has purchased Cerexagri. Previous EPA registration number assigned to this product: 4581-174

UPI, Inc. believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. **NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN.** The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with other materials or in any process. Further, since the conditions and methods of use are beyond the control of UPI, Inc. UPI, Inc. expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.

End of MSDS