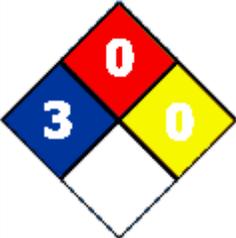




# Material Safety Data Sheet

## United Phosphorus, Inc.

NFPA	PPE		
			

Issued Date 07-Feb-2007

Revision Date 02-Jul-2013

Revision Number: 8

### 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 610-223-2180	8:00 am to 5:00 pm EST 8:00 am - 5:00 pm (EST)

**Product Name** Hydrothol® Granular Aquatic Algicide and Herbicide  
**EPA Reg #** 70506-174  
**Recommended Use** Aquatic algicide - Herbicide  
**Product Code** 12-172

## 2. HAZARDS IDENTIFICATION

### Emergency Overview

Causes irreversible eye damage  
Harmful by inhalation, in contact with skin and if swallowed  
Irritating to skin

**DANGER!****Appearance** Grey, Brown.**Physical State** Solid.**Odor** Solvent-like.**Potential Health Effects**

- Inhalation
- Skin contact

**Eyes**

Severely irritating to the eyes. Causes irreversible eye damage.

**Skin**

Severely irritating to the skin.

**Inhalation**

May cause irritation of respiratory tract.

**Ingestion**

May be harmful 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	11	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**

If breathing is irregular or stopped, administer artificial respiration  
May cause allergic respiratory reaction  
Call a poison control center or doctor for further treatment advice.

**Ingestion**

Call a physician or poison control center immediately  
May produce an allergic reaction  
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



## 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.
<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

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Grey Brown	<b>Odor</b>	Solvent-like
<b>Physical State</b>	Solid	<b>pH</b>	(1% solution) 4.6
<b>Boiling Point/Range</b>	Not available	<b>Melting Point/Range</b>	Not available
<b>Specific Gravity</b>	Not available	<b>Solubility</b>	Dispersible in water
<b>Evaporation Rate</b>	Not available	<b>Vapor pressure</b>	2.09 X 10 <sup>-5</sup> mmHg @25 C(Endothal salt)
<b>Vapor Density</b>	Not available	<b>VOC Content</b>	11.5%
<b>Viscosity</b>	Not available	<b>Molecular Weight</b>	no data available
<b>Bulk Density</b>	no data available	<b>Percent Solids</b>	Not available
<b>Percent Volatiles</b>	Not available		

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions
<b>Conditions to Avoid</b>	Avoid dust formation Extreme temperatures
<b>Incompatible Materials</b>	No materials to be especially mentioned
<b>Hazardous Decomposition Products</b>	Extreme temperatures may convert endothal product to endothal anhydride, a strong vesicant, causing blistering of eyes, mucous membranes and skin.

Possibility of Hazardous Polymerization

Hazardous polymerisation does not occur

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Product Information

Single exposure studies indicate: Oral - Slightly toxic to rats (LD50 1,540 mg/kg)  
Dermal - Practically non-toxic to rabbits (LD50 >10,000 mg/kg)  
Inhalation - Practically non-toxic to rats (4 hr LC50 5.32 mg/l)  
Skin irritation - Severely irritating  
Eye irritation - Severely irritating 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. Skelatal 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

#### Carcinogenicity

There are no known carcinogenic chemicals in this product.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Endothall Mono-Amine Salt Ecotoxicity

Acute Contact Toxicity Honey Bee (*Apis mellifera*) -

For endothall acid, mono-amine salt, and dipotassium salt

Practically non-toxic

Acute Toxicity Avian

Northern Bobwhite Quail (*Colinus virginianus*) LD50 = 736 mg/kg

Acute Toxicity Freshwater Fish (\*static and \*\*flow-thru)

\*Bluegill sunfish (*Lepomis macrochirus*), EC50 = 0.94 ppm

\*Rainbow trout (*Oncorhynchus mykiss*), EC50 = 0.56 ppm

\*\*Rainbow trout (*Oncorhynchus mykiss*), EC50 = 0.94 ppm

\*Cutthroat trout (*Oncorhynchus clarki*), EC50 = 0.18 ppm

\*Channel catfish (*Ictalurus punctatus*), EC50 = 0.49 ppm

Fathead minnow (*Pimephales promelas*), EC50 = 0.75 ppm

Acute Toxicity Freshwater Invertebrates (\*static)

\*Waterflea (*Daphnia magna*), 48hr, EC50 = 0.36 ppm

\*Grassshrimp (*Palaemonetes kadiakensis*), 96hr, EC50 = 0.05 ppm

\*Scud (*Gammarius lacustris*), 48hr, EC50 = 2.0 ppm

\*Scud (*Gammarius lacustris*), 96hr, EC50 = 0.5 ppm

\*Giant salmonfly (*Pteronarcys californica*), 48hr, EC50 = 3.25 ppm

Acute Toxicity Estuarine/Marine Fish (\*\* Flow-thru)

\*\*Sheepshead minnow (*Cyprinodon variegatus*), 96hr, EC50 = 3.5ppm

Acute Toxicity Estuarine/Marine Invertebrates (\*\* Flow-thru)

\*\*Mysid shrimp (*Mysidopsis bahia*), 96hr, EC50 = 2.2 ppm

\*\*Eastern oyster (*Crassostrea virginica*), shell deposition,

96hr, EC50 = 0.6 ppm. 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.

## 14. TRANSPORT INFORMATION

12-172  
Hydrothol® Granular Aquatic Algicide and Herbicide

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<u>DOT</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

15. REGULATORY INFORMATION

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**

Chronic Health Hazard	No
Acute Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	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

**16. OTHER INFORMATION**

**Revision Date** 02-Jul-2013

**Revision Summary**

Update section 1

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**End of MSDS**