



Safety Data Sheet

United Phosphorus, Inc.

Preparation Date 28-Apr-2015

Revision date 21-Jul-2017

Revision Number: 4

1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier

Product Description: Hydrothol® Granular Aquatic Algicide and Herbicide

Other means of identification

Item#: 12-172

Registration number(s) 70506-174

Recommended use of the chemical and restrictions on use

Recommended use Aquatic. Algaecide. - . Herbicide.

Uses advised against Activities contrary to label recommendation

Details of the Supplier of the Safety Data Sheet

Supplier Address

United Phosphorus Inc.
630 Freedom Business Center
Suite 402
King of Prussia, PA 19406

Emergency telephone number

Company Phone Number 1-800-438-6071

Emergency telephone number Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887

Medical: Rocky Mountain Poison Control Center
(866) 673-6671 (24hrs)

2. Hazards Identification

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral

Category 4

Label elements

EMERGENCY OVERVIEW

WARNING

Hazard Statements

HARMFUL IF SWALLOWED



Appearance grey brown

Physical state solid

Odor Solvent-like

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards Not Otherwise Classified (HNOC)

OTHER INFORMATION

3. Composition/information on Ingredients

Chemical name	CAS-No	Weight %	Trade secret
Mono(N,N-dimethylalkylamine)salt of endothall	66330-88-9	11	

If CAS number is "proprietary", the specific chemical identity and percentage of composition has been withheld as a trade secret.

4. First aid measures

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. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- Skin contact** 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. Seek immediate medical attention/advice. Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use.
- 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. Move to fresh air. Call a physician or poison control center immediately. Artificial respiration and/or oxygen may be necessary.
- Ingestion** Call a physician or poison control center immediately. May produce an allergic reaction. Clean mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention/advice. Do not induce vomiting without medical advice.

Most Important Symptoms and Effects, Both Acute and Delayed

Most Important Symptoms and Effects Burning feeling and temporary redness.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Notes to physician No information available. Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

Specific hazards arising from the chemical

No information available.

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

Explosion data

Protective equipment and precautions for firefighters

Use personal protective equipment. As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with skin, eyes and clothing. Wear protective gloves/protective clothing and eye/face protection.

Environmental Precautions

Environmental precautions 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. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for Clean-Up Sweep up and shovel into suitable containers for disposal. Keep in suitable and closed containers for disposal. Shovel or sweep up.

7. Handling and Storage

Precautions for safe handling

Handling Avoid dust formation. Avoid breathing dust. Keep out of reach of children. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid contact with skin and eyes. Empty containers may contain hazardous residues.

Conditions for safe storage, including any incompatibilities

Storage Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. Keep tightly closed in a dry and cool place. Keep in properly labelled containers. Keep containers tightly closed in a cool, well-ventilated place.

incompatible materials No information available.

8. Exposure Controls/Personal Protection

Exposure guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering controls 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.

Personal protective equipment

Eye/Face Protection

Skin protection

Respiratory protection

Goggles.

Rubber gloves. Wear protective gloves/clothing.

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

Information on basic physical and chemical properties

Physical state	solid	Odor	Solvent-like
Appearance	grey brown		
color	No information available		

<u>Property</u>	<u>VALUES</u>	<u>Remarks/ • Method</u>
pH	4.6	
Melting point/freezing point	5.6 °C / 42 °F	
Boiling Point/Range	No information available	
Flash Point	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability limit in air		
Upper Flammability Limit	No information available	
Lower Flammability Limit	No information available	
vapor pressure	2.09 X 10 ⁻⁵ mmHg @25 C(Endothal salt)	
Vapor Density	No information available	
Specific gravity	No information available	
Water solubility	No information available	
Solubility in Other Solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Viscosity, kinematic	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

OTHER INFORMATION

Softening point	No information available
molecular weight	No information available
VOC Content	No information available
density	No information available
Bulk density	No information available

10. Stability and Reactivity

Reactivity

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Avoid dust formation. Not known.

incompatible materials

No information available.

Hazardous decomposition products

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

11. Toxicological Information

Information on Likely Routes of Exposure

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.

- Inhalation** May cause irritation of respiratory tract.
- Eye contact** May cause irreversible damage to eyes.
- Skin contact** Irritating to skin.
- Ingestion** HARMFUL IF SWALLOWED.

Information on Toxicological Effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

- Sensitization** No information available.
- Mutagenic effects** No information available.
- Carcinogenicity** There are no known carcinogenic chemicals in this product.
- Reproductive effects** Not Available.
- STOT - Single Exposure** No information available.
- STOT - Repeated Exposure** No information available.
- Aspiration hazard** No information available.

Numerical Measures of Toxicity - Product information

- LD50 Oral** 1540 mg/kg (rat)
- LD50 Dermal** > 10000 mg/kg (rat)
- LC50 Inhalation** LC50/inhalation/4h/rat = 5.32 mg/l

12. Ecological Information

ecotoxicity

Endothall mono amine salt:

Acute contact toxicity Honey Bee

Practically non toxic

Acute Toxicity Avain

Northern Bobwhite Quail LD50

736 mg/kg

Acute Toxicity Freshwater Fish EC50

Bluegill sunfish 0.94 ppm

Rainbow trout 0.56 ppm

Cutthroat trout 0.18 ppm

Channel catfish 0.49 ppm

Acute Toxicity Freshwater Invertebrates EC50

Daphnia magna 0.36 ppm (48 hr)

Grasshrimp 0.05 ppm (96hr)

Scud 2.0 ppm (48hr)

Acute Toxicity Marine Invertebrates (flow thru) EC50 Mysid shrimp 2.2 ppm (96 hr)

Acute Toxicity Marine Fish (Flow thru) EC50

Sheepshead minnow 3.5 ppm (96 hr)

Persistence/Degradability

No information available.

Bioaccumulation/ Accumulation

No information available.

Other Adverse Effects

No information available

13. Disposal Considerations

Waste Treatment Methods

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

Refer to product label.

14. Transport Information

DOT

NOT REGULATED

TDG

NOT REGULATED

IATA

NOT REGULATED

IMDG/IMO

NOT REGULATED

15. Regulatory Information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

signal word DANGER

Ventilation Control PESTICIDE APPLICATORS & WORKERS THESE WORKERS MUST REFER TO PRODUCT LABELING AND DIRECTIONS FOR USE IN ACCORDANCE WITH EPA WORKER PROTECTION STANDARD 40 CFR PART 170.

Keep out of Reach of Children. Causes irreversible eye damage. May be fatal if swallowed. Toxic to fish and aquatic invertebrates.

International Inventories

USINV	Does not comply
DSL/NDSL	Does not comply
EINECS/ ELINCS	Does not comply
ENCS	Does not comply
China	Does not comply
KECL	Does not comply
PICCS	Does not comply
AICS	Does not comply
TSCA	Does not comply

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

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 and Title 40n of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous

Categorization

Acute health hazard	yes
Chronic health hazard	NO
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CERCLA

Not applicable

CERCLA
SARA Product RQ 0

RCRA
Pesticide Information

State Regulations
Not applicable

State Right-to-Know
Not applicable

International regulations
U.S. EPA Label information
EPA Pesticide registration number 70506-174

16. Other Information

NFPA HEALTH 3 flammability 0 Instability 0 Physical hazard -

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Revision Summary

Update section 12

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End of MSDS