



Material Safety Data Sheet

United Phosphorus, Inc.

NFPA	PPE		

Issued Date 07-Feb-2007

Revision Date 21-Dec-2010

Revision Number: 5

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)

Company Information
 UPI

Contact Information
 Customer Service

Phone Number
 1-800-438-6071

Available Hrs
 8:00 am to 5:00 pm EST

Product Name AQUATHOL® K Aquatic Herbicide
EPA Reg # 70506-176
Recommended Use Aquatic herbicide
Product Code 12-204

2. HAZARDS IDENTIFICATION

Emergency Overview

Causes irreversible eye damage

May be fatal if swallowed.

Harmful if inhaled

Harmful if absorbed through skin

Prolonged skin contact may cause local redness. May cause an allergic reaction in sensitive individuals.

DANGER!

Appearance Yellow, Brown.

Physical State Liquid.

Odor Slight chlorine.

Potential Health Effects

- Principle Routes of Exposure
- Inhalation
- Skin contact

Eyes
Skin

Causes irreversible eye damage..

May cause mild skin irritation. Repeated or prolonged exposure may cause severe skin irritation.. Prolonged contact can result in redness and blistering of skin..

Inhalation
Ingestion

Slightly toxic if inhaled.

Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients Name

Chemical Name	CAS-No	Weight %	OSHA PEL
Dipotassium endothall salt	2164-07-0	40.3	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 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 Center 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
Autoignition Temperature

Not available
Not available

Flammability Limits in Air

Not available

Extnguishing Media

Use: Water spray, Carbon dioxide (CO2), Dry chemical,

Fire/Explosion Hazard

No information available

Hazardous Combustion Products

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

NFPA

Health 3

Flammability 0

Instability 1

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Avoid contact with skin, eyes and clothing.

Environmental Precautions

Do not flush into surface water or sanitary sewer system. 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..

Methods for Clean-up

Remove all ignition sources. Soak up with inert absorbent material. Ground and bond containers when transferring material. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing. Keep out of reach of children. Empty containers may contain hazardous residues.

Storage

Store in an area where cross-contamination with pesticides, fertilizers, food or feed could not occur. .

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. . 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..
Personal Protective Equipment	
Eye/face Protection	Tightly fitting safety goggles. or. Face-shield.
Skin Protection	Chemical resistant gloves. Long sleeved clothing. Long pants. Chemical resistant footwear plus socks. Chemical resistant apron.
Respiratory Protection	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. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow Brown	Odor	Slight chlorine
Physical State	Liquid	pH	7.4
Boiling Point/Range	>100 °C	Melting Point/Range	Not available
Specific Gravity	1.285	Solubility	Miscible
Evaporation Rate	Not available	Vapor Pressure	Not available
Vapor Density	Not available	VOC Content	Not available
Viscosity	Not available	Molecular Weight	No data available
Bulk Density	No data available	Percent Solids	Not available
Percent Volatiles	59.7		

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions
Conditions to Avoid	No information available.
Incompatible Materials	No materials to be especially mentioned
Hazardous Decomposition Products	Extreme temperatures may convert endothall product to endothall anhydride, a strong vessicant, causing blistering of eyes, mucous membranes and skin. .
Possibility of Hazardous Polymerization	None under normal processing

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Component Information

Although no allergic skin reactions were observed in guinea pigs following exposure to this material in water, allergic skin reactions were observed following exposure to this material in ethanol. Repeated application to the skin of rats produced severe skin irritation, liver, and kidney effects considered to be secondary to irritation, and increased mortality. Long-term dietary administration produced no adverse effects in rats. Dermal - Slightly toxic to Rabbits (LD50 2,000 mg/kg)
Skin irritation - Non-irritating to rabbits Inhalation - Slightly toxic to rats (4 hr LC50 0.83 mg/l) aerosol Eye irritation - Cause irreversible eye damage in rabbits.
Endothall- Intentional swallowing of 40 ml led to death within 12-hours. Skin allergy was observed in guinea pigs following repeated exposures. 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 anomalies were observed in the offspring of rabbits and mice exposed orally 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

Endothall dipotassium salt ecotoxicity

Acute Contact Toxicity Honey Bee (*Apis mellifera*)

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

Practically non-toxic

Acute Toxicity Avian

Mallard duck(*Anas platyrhynchos*), LD50 = 328 mg/kg

Acute Toxicity Freshwater Fish

Bluegill sunfish(*Lepomis macrochirus*),flow-thru, EC50 = 1071 ppm

Rainbow trout(*Oncorhynchus mykiss*),flow-thru,EC50 =363 ppm

Chanel catfish(*Ictalurus punctatus*), static, EC50 = >100 ppm

Acute Toxicity Freshwater Invertebrates

Waterflea(*Daphnia magna*), flow-thru 48hr, EC50 = 223 ppm

Scud(*Gammarius lacustris*),static 48hr, EC50 = 313 ppm

Acute Toxicity Estuarine/Marine Fish

Sheepshead minnow(*Cyrinodon variegates*), flow-thru 96hr,
EC50 = 340 ppm

Coho salmon(*Oncorhynchus kisutch*)static, 96hr, EC50 = >100ppm

Acute Toxicity Estuarine/Marine Invertebrates

Mysid shrimp(*Mysidopsis bahia*), flow-thru 96hr, EC50 = 257 ppm

Eastern oyster(*Crassostrea virginica*)shell deposition,
flow-thru 96hr, EC50 = 335 ppm

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

Non refillable container. Do not reuse this container. . Triple rinse or pressure rinse promptly after emptying. . Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. .

14. TRANSPORT INFORMATION

DOT

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

ICAO

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

IATA

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

IMDG/IMO

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

15. REGULATORY INFORMATION

International Inventories

Dipotassium endothall salt
NDSL Listed
EINECS/ELINCS Listed

USAFederal Regulations**SARA 313**

Y

Chemical Name	CAS-No	Weight %
Dipotassium endothall salt	2164-07-0	40.3

SARA 311/312 Hazardous Categorization

Chronic Health Hazard No
Acute Health Hazard Yes
Fire Hazard No

12-204 - AQUATHOL® K Aquatic Herbicide

Sudden Release of Pressure Hazard
Reactive Hazard

No
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

21-Dec-2010

Revision Summary

Update section 2 Update section 8

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