



United Phosphorus, Inc.

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

Issued Date 23-Apr-2014

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Revision Number: 2

**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	1-800-438-6071	8:00 am to 5:00 pm EST

<b>Product Name</b>	AquaStrike
<b>EPA Reg #</b>	70506-302
<b>Recommended Use</b>	Aquatic herbicide
<b>Product Code</b>	AQS

**2. HAZARDS IDENTIFICATION**

<b>Emergency Overview</b>		
Causes irreversible eye damage		
May be fatal if swallowed.		
May be fatal if inhaled		
Harmful if absorbed through skin		
<b>DANGER!</b>		
<b>Appearance</b> Yellow, Brown.	<b>Physical State</b> Liquid.	<b>Odor</b> Slight chlorine.

**Potential Health Effects**

- Principle Routes of Exposure
- Inhalation
- Skin contact

<b>Eyes</b>	Causes irreversible eye damage.
<b>Skin</b>	May cause mild skin irritation.
<b>Inhalation</b>	Slightly toxic if inhaled.
<b>Ingestion</b>	Harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Ingredients Name**

Component	CAS-No	Weight %	OSHA PEL
Dipotassium endothall salt 2164-07-0 ( 28.64 )	2164-07-0	28.64	N/A
Diquat dibromide 85-00-7 ( 10.6 )	85-00-7	10.6	(vacated) TWA: 0.5 mg/m <sup>3</sup>

### 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  
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

**Flammable Explosive Properties**

**Flash Point** Not available  
**Autoignition Temperature** Not available  
**Flammability Limits in Air** Not available  
**Extinguishing 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 vesicant 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

Chemical Name	ACGIH TLV	OSHA PEL
Diquat dibromide	TWA: 0.5 mg/m <sup>3</sup> inhalable fraction TWA: 0.1 mg/m <sup>3</sup> respirable fraction S*	(vacated) TWA: 0.5 mg/m <sup>3</sup>

**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.

**Skin Protection**

Chemical resistant gloves. waterproof gloves. Long sleeved clothing. Long pants. Socks and footwear.

**Respiratory Protection**

Mixers & loaders:

A NIOSH approved dust mist filtering respirator with MSA/NIOSH approval number prefix TC-21C or a NIOSH approved respirator with any N, R, P, or HE filter.

### 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

<b>Appearance</b>	Yellow Brown	<b>Odor</b>	Slight chlorine
<b>Physical State</b>	Liquid	<b>pH</b>	7.4
<b>Boiling Point/Range</b>	>100 °C	<b>Melting Point/Range</b>	Not available
<b>Specific Gravity</b>	1.285	<b>Solubility</b>	Miscible
<b>Evaporation Rate</b>	Not available	<b>Vapor pressure</b>	Not available
<b>Vapor Density</b>	Not available	<b>VOC Content</b>	Not available
<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>	No information available
<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>	None under normal processing

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Product Information

**AquaStrike**  
**Acute Oral LD50 = 93.28 mg/kg**  
**Acute dermal LD50 = > 2,000 mg/kg**  
**Acute Inhalation LC50 = >0.52 mg/L**

#### 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. Eye irritation - Cause irreversible eye damage in rabbits

### Chronic Toxicity

#### Carcinogenicity

There are no known carcinogenic chemicals in this product.

## 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. Chem Fate:. This material is rapidly degraded in aqueous systems by indigenous microbial population to CO<sub>2</sub> and other non-toxic natural products.

## 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 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. Pressure 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. (Endothal)  
**Hazard Class** 6.1  
**Packing Group** PG III

**IATA**

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

**IMDG/IMO**

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

**TDG**

**Proper Shipping Name** Not regulated  
**Hazard Class** Pesticide, liquid, toxic, n.o.s. (Endothal)  
**UN-No** 6.1  
**Packing Group** 2902  
PG III

**15. REGULATORY INFORMATION**

**International Inventories**

Chemical Name	TSCA	DSL	NDSL	EINECS/ ELINCS	ENCS	CHINA	KECL	AICS
Dipotassium endothall salt	Present		X	X				
Diquat dibromide		X		X	Present		Present	X

**USA**

**Federal Regulations**

**SARA 313**

Y

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values
Dipotassium endothall salt	2164-07-0	28.64	1.0

**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**

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Diquat dibromide 85-00-7 ( 10.6 )				X

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

This product does not contain any HAPs.

**CERCLA**

Component	RQ
Diquat dibromide 85-00-7 ( 10.6 )	1000 lb

**RCRA**

**Pesticide Information**

Component	FIFRA - Restricted Use	FIFRA - Pesticide Product Other Ingredients	FIFRA - Listing of Pesticide Chemicals	California Pesticides - Restricted Materials
Diquat dibromide 85-00-7 ( 10.6 )			X	

**State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**State Right-to-Know**

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Dipotassium endothall salt		X			
Diquat dibromide	X	X	X		

**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** 23-Apr-2014

**Revision Summary**  
Update section 3

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**End of MSDS**