## 1. PRODUCT AND COMPANY IDENTIFICATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="NFPA Image" /></td>
<td><img src="image" alt="PPE Image" /></td>
</tr>
</tbody>
</table>

Issued Date: 07-Feb-2007  
Revision Date: 21-Dec-2010  
Revision Number: 5

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

<table>
<thead>
<tr>
<th>Company Information</th>
<th>Contact Information</th>
<th>Phone Number</th>
<th>Available Hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>UPI</td>
<td>Customer Service</td>
<td>1-800-438-6071</td>
<td>8:00 am to 5:00 pm EST</td>
</tr>
</tbody>
</table>

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

**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

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 Causes irreversible eye damage.
  Skin 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 Slightly toxic if inhaled.
  Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients Name</th>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>OSHA PEL</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Dipotassium endothall salt</td>
<td>2164-07-0</td>
<td>40.3</td>
<td>N/A</td>
</tr>
</tbody>
</table>

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
5. FIRE-FIGHTING MEASURES

Flammable Explosive Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not available</td>
</tr>
</tbody>
</table>

Flammability Limits in Air

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extinguishing Media</td>
<td>Use: Water spray, Carbon dioxide (CO2), Dry chemical,</td>
</tr>
<tr>
<td>Fire/Explosion Hazard</td>
<td>No information available</td>
</tr>
<tr>
<td>Hazardous Combustion Products</td>
<td>Extreme temperatures convert Endothall product to endothall anhydride which is a strong vesicant causing blistering of eyes, mucous membranes and skin.</td>
</tr>
</tbody>
</table>

NFPA Health Flammability Instability

<table>
<thead>
<tr>
<th>Safety Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health 3</td>
<td>Flammability 0</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Yellow Brown</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>&gt;100 °C</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.285</td>
</tr>
<tr>
<td>Evaporation Rate</td>
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</tr>
<tr>
<td>Vapor Density</td>
<td>Not available</td>
</tr>
<tr>
<td>Viscosity</td>
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<tr>
<td>Bulk Density</td>
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<tr>
<td>Percent Volatiles</td>
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<tr>
<td>Odor</td>
<td>Slight chlorine</td>
</tr>
<tr>
<td>pH</td>
<td>7.4</td>
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<tr>
<td>Melting Point/Range</td>
<td>Not available</td>
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<tr>
<td>Solubility</td>
<td>Miscible</td>
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<tr>
<td>Vapor Pressure</td>
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</tr>
<tr>
<td>VOC Content</td>
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</tr>
<tr>
<td>Molecular Weight</td>
<td>No data available</td>
</tr>
<tr>
<td>Percent Solids</td>
<td>Not available</td>
</tr>
</tbody>
</table>

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 vesicant, 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 (Gammarus lacustris), static 48hr, EC50 = 313 ppm

Acute Toxicity Estuarine/Marine Fish
Sheepshead minnow (Cyprinodon variegates), flow-thru 96hr,
EC50 = 340 ppm
Coho salmon (Oncorhynchus kisutch) static, 96hr, EC50 = >100 ppm

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

USA
Federal Regulations
SARA 313
- Y

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
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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  21-Dec-2010
Revision Summary  Update section 2  Update section 8

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End of MSDS