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

Product identifier
Product Description: AQUATHOL® K Aquatic Herbicide

Other means of identification
Item#: 12-204
UN-No 2902
Synonyms Not Available
Registration number(s) 70506-176

Recommended use of the chemical and restrictions on use
Recommended use Aquatic 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)

<table>
<thead>
<tr>
<th>Acute toxicity - Dermal</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Label elements

EMERGENCY OVERVIEW

DANGER

hazard statements
Harmful in contact with skin
Fatal if inhaled
Precautionary Statements - Prevention
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
In case of inadequate ventilation wear respiratory protection

If ON SKIN: Wash with plenty of soap and water
Call a POISON CENTER or doctor if you feel unwell
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed
Store locked up

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dipotassium endothall salt</td>
<td>2164-07-0</td>
<td>40.3</td>
<td>Trade secret</td>
</tr>
</tbody>
</table>

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 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
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. 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

Burning feeling and temporary redness.

Indication of Any Immediate Medical Attention and Special Treatment Needed

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 Decomposition by contact with water may generate vapours which can be ignited by heat or open flame.

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
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.

Environmental Precautions

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 and material for containment and cleaning up

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

Precautions for safe handling

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.

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 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. 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. Chemical resistant footwear plus socks.
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

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>VALUES</th>
<th>Remarks/ • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>appearance</td>
<td>Yellow brown</td>
<td></td>
</tr>
<tr>
<td>color</td>
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<td></td>
</tr>
<tr>
<td>Odor</td>
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<td></td>
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<tr>
<td>pH</td>
<td>7.4</td>
<td></td>
</tr>
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<td>Melting point/freezing point</td>
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</tr>
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<td>Boiling Point/Range</td>
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<tr>
<td>Flash Point</td>
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<tr>
<td>Evaporation Rate</td>
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<tr>
<td>flammability (solid, gas)</td>
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<td>Flammability limit in air</td>
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<td></td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
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<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
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<td></td>
</tr>
<tr>
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<td>Vapor Density</td>
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<tr>
<td>Solubility in Other Solvents</td>
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<td>Partition coefficient: n-octanol/water</td>
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<td>Autoignition temperature</td>
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<td></td>
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<tr>
<td>decomposition temperature</td>
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<td></td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
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<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
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<td></td>
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<tr>
<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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<td>Softening point</td>
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</tr>
<tr>
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<td></td>
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<tr>
<td>Bulk density</td>
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<td></td>
</tr>
</tbody>
</table>

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
No information available.

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

Inhalation
Toxic by inhalation.

Eye contact
May cause irreversible damage to eyes.

Skin contact
May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion
MAY BE HARMFUL IF SWALLOWED.

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 on the mothers. No genetic changes were observed in tests using bacteria, animal cells or animals.

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 Dermal: 2000 mg/kg
LC50 Inhalation: 0.83 mg/l (4-hr)
12. Ecological Information

**Ecotoxicity**

Endothall dipotassium salt:
Mallard duck LD50 = 328 mg/kg
Bluegill sunfish EC50 = 1071 ppm
Rainbow trout EC50 = 363 ppm
Sheepshed minnow 96 hr EC50 = 340 ppm
Mysid shrimp 96 hr EC50 = 257 ppm
Eastern oyster 96 hr EC50 = 335 ppm

40.3% of the mixture consists of components(s) of unknown hazards to the aquatic environment

**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**

Non refillable container. Do not reuse this container. Refer to product label.

14. Transport Information

**DOT**

When shipped as a limited quantity by domestic highway, as per 49 CFR 173.153 the combination package, not exceeding a gross weight of 66 pounds (30 kg), may contain inner packagings not over 1.3 gallons (5 L) each. Limited quantity designated packagings are excepted from labeling and packaging specification requirements.

If the limited quantity package is shipped by air the package must also conform to applicable requirements of 173.27.

<table>
<thead>
<tr>
<th>UN-No</th>
<th>2902</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper shipping name</td>
<td>Pesticides, liquid, toxic. n.o.s. (Endothal)</td>
</tr>
<tr>
<td>Hazard class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>PG III</td>
</tr>
<tr>
<td>Reportable Quantity (RQ):</td>
<td>1,000 lbs</td>
</tr>
</tbody>
</table>

**ICAO**

<table>
<thead>
<tr>
<th>UN-No</th>
<th>2902</th>
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<tbody>
<tr>
<td>Proper shipping name</td>
<td>Pesticide, liquid, toxic. n.o.s (Endothall)</td>
</tr>
<tr>
<td>Hazard class</td>
<td>6.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>PG III</td>
</tr>
</tbody>
</table>

**IATA**

Page 6 / 8
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**

**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.

Corrosive. Causes irreversible eye damage. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Pesticide is toxic to mammals.

**International Inventories**

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>USINV</td>
<td>Not determined</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Not determined</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>China</td>
<td>Does not comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>TSCA</td>
<td>Complies</td>
</tr>
</tbody>
</table>

**Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>SARA 313 - Threshold Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dipotassium endothall salt</td>
<td>2164-07-0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazardous Categorization**
Acute health hazard: yes
Chronic health hazard: NO
Fire hazard: No
Sudden release of pressure hazard: No
Reactive Hazard: yes

CERCLA
SARA Product RQ: 0

RCRA
Pesticide Information

State Regulations

State Right-to-Know

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
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<tbody>
<tr>
<td>Dipotassium endothall salt</td>
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<td>X</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

International regulations

U.S. EPA Label information

EPA Pesticide registration number: 70506-176

16. Other Information

NFPA
Health: 3
Flammability: 0
Instability: 0
Physical hazard: -

Preparation Date: 17-Apr-2015
Revision date: 18-Nov-2015
Revision Summary: Update section 15

Disclaimer

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End of MSDS