

## Aquathol K

Date of Issue: 31<sup>st</sup> October 2005

### 1. SUBSTANCE/PREPARATION AND COMPANY IDENTIFICATION

**Chemical name of active ingredient(s):** Dipotassium endothal  
**Recommended use:** Aquatic herbicide.

**Supplier:** Elliott Technologies Limited  
45 Kitchener Road  
Pukekohe  
Phone 0800 100 325

**Emergency telephone number:** 0800 Poison (0800 764 766) 24 Hours

### 2. HAZARDS IDENTIFICATION

**Hazard Classification:** **6.1B, 6.1C, 8.3A, 6.9B, 9.1A, 9.2A, 9.3B**  
Approved Handler Applies to all phases.  
Aquatic qualification required for use.  
This product must be tracked throughout the lifecycle of the product

**Required identification Details:**  
**TOXIC** - May be fatal if swallowed, inhaled. Harmful if absorbed through the skin.  
**CORROSIVE** - May cause eye damage.  
**ECOTOXIC** - Very toxic to aquatic organisms. Toxic to the soil environment. Toxic to terrestrial vertebrates.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Substance/preparation Information on hazardous ingredients

Common name	CAS No	%
Dipotassium endothal	CAS No.2164-07-0	40.3

### 4. FIRST-AID MEASURES

#### Description of necessary first aid measures:

#### Effects and symptoms

#### First-aid measures

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be moderately toxic if swallowed, slightly toxic if absorbed through the skin or inhaled, non-irritating to skin and causes irreversible eye damage.

<b>Inhalation:</b>	Move person to fresh air. If person is not breathing, call 111 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
<b>Ingestion:</b>	Call the National Poisons Centre <b>0800 POISON</b> (0800 764 766) or a doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless told to do so by the poisons centre or doctor. DO NOT give anything by mouth to an unconscious person.
<b>Skin contact:</b>	Immediately wash with cool / cold water. If irritation develops, immediately obtain medical attention.
<b>Eye contact:</b>	Hold eye open and rinse slowly and gently with clean water for 15 minutes. Remove contact lenses, if present after the first 5 minutes, then continue rinsing eyes. Call a doctor for treatment advice.
<b>Notes to a physician:</b>	Measures against circulatory shock, respiratory depression and convulsion may be required.

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## 5. FIRE-FIGHTING MEASURES

<b>HAZCHEM Code:</b>	2X
<b>Extinguishing media :</b>	Fog or fine water spray, foam, dry chemical or carbon dioxide.
<b>Hazardous thermal (de)composition products:</b>	Elevated temperatures may convert endothal to anhydride, a strong vesicant, causing blistering of eyes, mucous membranes and skin.
<b>Protection of fire-fighters:</b>	Remain upwind. Wear full protective clothing and self contained breathing apparatus. Do not breath smoke or gases.

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## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions:</b>	Wear protective clothing and personal protective equipment as described in section 8. Keep unprotected persons and animals out of the area.
<b>Environmental precautions:</b>	Keep material out of lakes, streams, ponds and sewer drains
<b>Methods for cleaning up:</b>	Dike to confine spill and absorb with a inert materials absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label contents for disposal.

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## 7. HANDLING AND STORAGE

<b>Handling:</b>	Do not breath vapour. Do not breath mist. Wash thoroughly after handling. Keep container closed.
<b>Storage:</b>	Do not store in a manner where cross-contamination with pesticides, fertilisers, food or feed could occur. Refer to HAZNOTE or storage

quantity controls.

**Packaging materials:** HDPE Plastic Jerry cans.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace Exposure Guidelines

**Workplace exposure standards:** Not Established

### **Exposure Standards outside:**

**The workplace:** TEL: TEL water 0.2 ppm dipotassium endothal  
EEL: EEL water 0086 ppm dipotassium endothal

### Engineering measures

**Exposure control measures:** Provide ventilation if necessary to minimise exposure.

### Personal Protective Equipment

#### **Detail specifications for equipment:**

#### **Respiratory system:**

Where airborne exposure is likely wear, as a minimum, a properly fitted half-face or full-face air purifying respirator which is approved for pesticides. Respirator use and selection must be based on airborne concentrations.

#### **Skin and body:**

Nitrile rubber apron should be worn to prevent contact with the liquid. Wear long sleeved shirt, long pants.

#### **Hands:**

Wear Nitrile rubber gloves.

#### **Eyes:**

Wear chemical goggles or full face mask and have eye flushing equipment immediately available.

#### **General hygiene:**

Do not eat, drink or smoke when using. Wash hands and face before meals and after work.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State, odour & colour:** Yellow Brown liquid with slight chlorine odour.

**pH:** 7.4 (nominal)

**Vapour Pressure:** Negligible.

**Vapour Density:** Not Established

**Boiling Point:** > 100°C

**Freezing/melting point:** N/A

**Solubility:** Miscible

**Specific gravity or density:** 1.285 g / ml

**Flashpoint:** N/A

**Octanol/water partition coefficient:**  $K_{ow} \log p = -2.09$  (endothal unstated pH)

**Explosion properties:** Not Explosive

**Oxidation properties:** Not an Oxidiser

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## 10. STABILITY AND REACTIVITY

**Stability:** Chemically stable under normal conditions of storage and use.

**Conditions to avoid:** Extremes of temperature

**Materials to avoid:** None known.

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<b>Hazardous decomposition Products:</b>	Elevated temperatures may convert endothal to anhydride, a strong vesicant, causing blistering of eyes, mucous membranes and skin.
<b>Hazardous polymerization:</b>	Does not occur.
<b>Specific Data:</b>	
<b>Hazardous reactions :</b>	None known.

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## 11. TOXICOLOGICAL INFORMATION

<b>Acute toxicity – Oral :</b>	Oral LD <sub>50</sub> (Rat) 99.5 mg/kg Long-term dietary administration to rats produced no adverse effects.
<b>Acute toxicity - Dermal :</b>	Dermal LD <sub>50</sub> (Rabbits) 2000 mg/kg
<b>Acute toxicity – Inhalation:</b>	Inhalation (Rats) 4-hour LC <sub>50</sub> 0.83 mg/L; aerosol.
<b>Skin irritation :</b>	Non-irritating to Rabbits.
<b>Eye irritation:</b>	Causes irreversible eye damage in Rabbits
<b>Sensitization :</b>	Not a skin sensitiser.
<b>Chronic toxicity</b>	

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**Endothal Potassium:** Although no allergic skin reactions were observed in Guinea pigs following exposure to this material in water, allergic 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 increases mortality.

**Endothal:** Skin allergy was observed in Guinea pigs following repeat exposure. Repeated dietary administration (via gelatin capsule) produced vomiting, diarrhea, sluggish movement, and liver 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.

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## 12. ECOLOGICAL INFORMATION

**Ecotoxicity :** Endothal-potassium

**E.E.L**

**T.E.L**

The following withholding periods apply to the taking of water for drinking, watering livestock, or preparing agrichemical sprays or irrigation, unless it can be shown that the water at the point of take has concentrations of dipotassium endothal below the TEL water (0.2 ppm) and EEL water (0.086 ppm) values established, as applicable:

- 14 days following application with up to and including 4.25 mg/L dipotassium endothal;
- 25 days following application with up to and including 5 mg/L dipotassium endothal.

- No taking of fish for consumption or use as feed within 3 days of application of the substance.
- No swimming shall be permitted in the treated water body within 24 hours of application of the substance.

### Toxicity to Aquatic species

Bluegill sunfish	- LC <sub>50</sub> 316 – 501 mg/litre
Rainbow Trout	- LC <sub>50</sub> 107 – 528.7mg/litre
Large mouth Bass	- LC <sub>50</sub> 130 mg/litre
Sheepshead Minnow	- LC <sub>50</sub> 340 mg/litre
Small mouth Bass	- LC <sub>50</sub> 47 mg/litre
Chinook Salmon (Juvinales)	-14 day LC <sub>50</sub> 62.5 ppm
Eastern oyster	- LC <sub>50</sub> 117 mg/litre
Fiddler Crab	- LC <sub>50</sub> 752.4 mg/litre
Mysid shrimp	- LC <sub>50</sub> 79 mg/litre
Daphnia magna	- EC <sub>50</sub> 72 hour 319 mg/litre
Fresh water Blue green algae	- LC <sub>50</sub> >4.8 mg/litre
Fresh water green algae	- LC <sub>50</sub> >4.8 mg/litre
Fresh water diatoms	- LC <sub>50</sub> >3.6 mg/litre
Marine diatoms	- LC <sub>50</sub> >9.0 mg/litre
Mallard Duck and Bobwhite Quail	8 day LC <sub>50</sub> >5000 ppm
Mallard Duck Acute	LD50 344 mg/kg

### Avian Toxicity

### Persistence/degradability Water

Endothal-potassium is rapidly degraded in aqueous systems by the indigenous microbial population to CO<sub>2</sub> and other non-toxic natural products.  
Does not bioaccumulate.

### Bioaccumulative potential :

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## 13. DISPOSAL CONSIDERATIONS

### Methods of disposal :

Ensure that all product is used according to label instructions as the preferred option for disposal. Triple rinse empty container and add rinsate to treatment tank. Puncture container. Burn if permitted and conditions, especially wind direction permit, otherwise bury in an approved landfill.

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## 14. TRANSPORT INFORMATION - International transport regulations

<b>UN number:</b>	<b>2902</b>
<b>Class or Division:</b>	6.1
<b>Sub Class:</b>	9
<b>Packing Group:</b>	III
<b>Marine Pollutant:</b>	N/A
<b>Proper shipping name :</b>	<b>Pesticide, liquid, toxic, n.o.s.</b>

### Other Information:

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## 15. REGULATORY INFORMATION

**ACVM Registered Number:** Not Applicable  
**HSNO Approval Code:** HSR000946

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## 16. OTHER INFORMATION

**Additional information:** **Original Issue Date:** 31<sup>th</sup> October 2005  
**Revision Date:** N/A  
**Replaces:** N/A

### ***Disclaimer***

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