1) IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: CAMPBELL POACHEK TURF HERBICIDE
Other Names: Dipotassium salt of endothal
Chemical Group: Not specified
CAS No.: 
Recommended Use: Herbicide for use on recreational turf.
Supplier Details: Colin Campbell (Chemicals) Pty Ltd ABN 29 000 045 590
5 Blackfriar Place
Wetherill Park NSW 2164
Telephone: (02) 9725 2544
Fax: (02) 9604 7768
Email: cccsyd@campbellchemicals.com.au
Website: www.campbellchemicals.com.au
Contact: Product Development Manager – (02) 9725 2544
Emergency Telephone Number: 13 11 26 (Poisons Information Centre)

2) HAZARDS IDENTIFICATION

GHS classification: Acute toxicity dermal : Category 4
Acute toxicity inhalation: Category 1/2
GHS Signal Words: DANGER
Hazard Statements : H312 : Harmful in contact with skin
H332 : Fatal if inhaled
General P101 : If medical advice is needed, have product container or label at hand.
Precautionary P102 : Keep out of reach of children
Statements : P103 : Read label before use.

Pictograms : 
Precautionary statements P260 : Do not breathe fumes, mists, vapours or spray.
P261 : Avoid breathing fumes, mists, vapours or spray.
Prevention: P262 : Do not get in eyes, on skin, or on clothing.
Precautionary statements

Response:

P310 : Immediately call a Poisons Information Centre or doctor.
P361 : Remove contaminated clothing immediately.
P363 : Wash contaminated clothing before reuse.
P301 + P310 : IF SWALLOWED : Immediately call a Poisons Information Centre or doctor
P301 + P312 : IF SWALLOWED : Call a Poisons Information Centre or doctor if you feel unwell.
P301 + P330 + P331 : IF SWALLOWED : Rinse mouth. Do NOT induce vomiting.
P302 + P352 : IF INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P370 + P378 Not combustible. Use extinguishing media suited to burning materials.

Storage:

P405 : Store locked up.
P410 : Protect from sunlight.
P403 + P233 : Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Dispose of contents and container as specified on the registered label.

Other information:

Dangerous goods.
Hazardous substance.

3) COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endothal</td>
<td>2164-07-0</td>
<td>175g/L</td>
</tr>
<tr>
<td>Other ingredients</td>
<td></td>
<td>Non hazardous</td>
</tr>
</tbody>
</table>

4) FIRST AID MEASURES

If poisoning occurs, move out of dangerous area immediately contact a doctor or Poison Information Centre (Ph: 13 11 26) and follow the advice given.
Show this Material Safety Data Sheet to the doctor.

If inhaled:

If inhalation occurs contact a Poisons Information Centre, or call a doctor at once. Urgent hospital treatment is likely to be needed. Remove source of contamination or move victim to fresh air and keep at rest. DO NOT allow victim to move about unnecessarily. Symptoms of pulmonary oedema can be delayed up to 48 hours after exposure.

In case of skin

Wash gently and thoroughly affected areas with mild soap and plenty of water.
contact: for 10-20 minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard.

In case of eye contact: No effects expected. If irritation does occur, check and remove any contact lenses. Protect unharmed eye. Rinse eyes immediately with clean water for at least 5 minutes. Keep eye wide open while rinsing. Obtain medical advice if irritation becomes painful or lasts more than a few minutes.

If swallowed: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

First Aid facilities: Ensure eye wash and safety shower are available.

Medical Attention: Symptoms may be delayed. The first aid procedure should be established in consultation with a doctor responsible for industrial medicine.

5) FIRE FIGHTING MEASURES

Extinguishing media: Not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Hazard from combustion products: The major hazard in fires is usually inhalation of heated toxic or oxygen deficient (or both), fire gases. There is little risk of explosion from this product if commercial quantities are involved in a fire.

Precautions for fighting fires: Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely remove intact containers from the fire. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire residues and contaminated fire extinguishing water in accordance with local regulations. Do not release contaminated water into the environment.

Hazchem Code: 2X

6) ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Do not smoke, eat or drink during the clean up process. Wear personal protective clothing and equipment as detailed in Section 8 PERSONAL PROTECTION. Keep people and animals away. Ensure adequate ventilation. Contain spill and absorb with earth, sand, clay or other absorbent material. Prevent spilled material from entering drains or watercourses. Collect and store in properly labelled drums for safe disposal. Clean floor with a damp cloth and place it in the drum. Seal drums and label ready for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses etc is unavoidable warn the local water authority.
7) HANDLING AND STORAGE

Handling
Keep out of reach of children. Keep exposure to this product to a minimum, and
minimise the quantities kept in work areas. Will irritate eyes and skin. Avoid contact
with eyes and skin. Do not inhale spray mist. After use and before eating, drinking or
smoking wash hands, arms and face thoroughly with soap and water. After each
day's use wash gloves and contaminated clothing.

Storage
Store in the closed original container in a cool well ventilated area. Do not store for
prolonged periods in direct sunlight. Store in a locked room away from children,
animals, food, animal feed, seed and fertilisers.

8) EXPOSURE CONTROL/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Exposure Standards</th>
<th>TWA (mg/m³)</th>
<th>STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not set</td>
<td>Not set</td>
</tr>
</tbody>
</table>

Exposure standard – Time Weighted Average (TWA) means the average air
borne concentration of a particular substance when calculated over a normal
eight hour working day, for a five-day working week.

Short Term Exposure Limit (STEL) means the
exposure level that may be equalled (but should not be exceeded for no longer
than 15 minutes and should not be repeated more than 4 times per day. There
should be at least 60 minutes between successive exposures at the STEL.

Biological Limit Values
None allocated

Engineering Controls
Control process conditions to avoid contact. Use in a well ventilated area only.
If natural ventilation is inadequate, use of a fan is suggested.

Personal Protective Equipment

<table>
<thead>
<tr>
<th>Eyes:</th>
<th>Protective glasses or safety goggles. Eye wash bottle with pure water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing:</td>
<td>Impervious overalls buttoned to the neck and wrists and a washable hat.</td>
</tr>
<tr>
<td>Gloves:</td>
<td>Polyvinyl alcohol or nitrile-butyl-rubber gloves. Before removing gloves clean them with soap and water.</td>
</tr>
<tr>
<td>Respiratory:</td>
<td>If inhalation is likely an AS/NZS 1715/1716 approved respirator should be worn.</td>
</tr>
</tbody>
</table>

9) PHYSICAL AND CHEMICALS PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Yellow-brown translucent liquid</td>
</tr>
<tr>
<td>Odour:</td>
<td>Mild chlorine type odour.</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>2.37 kPa at 20°C (water vapour pressure)</td>
</tr>
<tr>
<td>Relative vapour density:</td>
<td>Not available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>As for water</td>
</tr>
</tbody>
</table>
Boiling point: About 100°C at 100 kPa
Freezing/Melting point: Below 0°C
pH: 7.1
Solubility: Completely soluble in water.
Specific gravity: 1.13
Flash point: No data
Flammability (explosive) limit: Not available
Auto ignition temperature: No data available.
Partition coefficient (octanol/water): No data available.
Viscosity: No data available
Oxidising properties: No data available.

10) STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use and storage.
Conditions to avoid: Protect this product from light. Store in the closed original container in a dry, well-ventilated area out of direct sunlight.
Incompatible materials: No particular incompatibilities.
Hazardous decomposition products: This product is likely to decompose only after heating to dryness, followed by further strong heating. In a fire, formation of carbon monoxide and carbon dioxide can be expected. Water is also formed. May form nitrogen and its compounds and, under some circumstances, oxides of nitrogen. Occasionally hydrogen cyanide gas in reducing atmospheres. Potassium compounds. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgement, and unconsciousness followed by coma and death.
Hazardous reactions: Stable under recommended storage conditions. No decomposition if used as directed. Does not polymerise.

10) TOXICOLOGICAL INFORMATION

There are no data to hand indicating any particular target organs.

Inhalation: Available data shows that this product is very toxic, but symptoms are not available. In addition product may be mildly irritating, but is unlikely to cause anything more than mild transient discomfort.
LONG TERM EXPOSURE – No data for health effects associated with long term inhalation.

Skin contact: Available data shows that this product is harmful, but symptoms are not available. In addition product may be mildly irritating, but is unlikely to cause anything more than mild transient discomfort.
LONG TERM EXPOSURE – No data for health effects associated
with long term skin exposure.

**Eye contact:**
This product may be irritating to the eyes, but is unlikely to cause anything more than mild transient discomfort.
LONG TERM EXPOSURE – No data for health effects associated with long term eye exposure.

**Ingestion:**
Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful, but symptoms are not available. However, this product may be irritating to mucous membranes, but is unlikely to cause anything more than mild transient discomfort.
LONG TERM EXPOSURE – No data for health effects associated with long term ingestion.

**Chronic toxicity:**

- **Germ cell mutagenicity:** No data
- **Carcinogenicity:** No significant ingredient is classified as carcinogenic by SWA, NTP or IARC.

**Acute toxicity:**

- **Oral toxicity (active constituent):** $LD_{50}$ 233 mg/kg in rats
- **Dermal toxicity (active constituent):** $LD_{50}$ 481 mg/kg in rabbits
- **Inhalation toxicity:** $LC_{50}$ (4-hr) 0.7 mg/L in rats
- **Sensitisation:** No data

**Endothal:**

- **Fish toxicity:**
  - $LC_{50}$ *Leponis macrochirus* (bluegill sunfish) : 0.94mg/L
  - $LC_{50}$ *Oncorhynchus mykiss* (rainbow trout) : 0.56-0.94mg/L
  - $LC_{50}$ Channel catfish : 0.49 mg/L
  - $LC_{50}$ *Pimephales promelas* (fathead minnow) : 0.75mg/L
- **Birds:**
  - $LD_{50}$ bobwhite quail : 736mg/kg
- **Bees:** No data

**Environmental fate, persistence and degradability, mobility**

- **Identified harmful**
  - Highly toxic to fish and aquatic invertebrate. It is also toxic to wildlife
effects on environment:

Other precautions: Do not contaminate dams, waterways or sewers with this product.

12) DISPOSAL CONSIDERATIONS

This product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used containers. Triple or preferable pressure rinse containers before disposal. Add rinsings to the mixing tank. Do not dispose of undiluted chemical on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

13) TRANSPORT INFORMATION

Dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

UN No.: 2902
Proper shipping name: PESTICIDE, LIQUID, TOXIC,N.O.S.
Class: 6.1
Special provisions: 61, 223, 274
Packing group: III
Packing instruction: P001, IBC03, LP01

14) REGULATORY INFORMATION

Registered under the Agricultural and Veterinary Chemicals Act 1988 (Commonwealth) Australian Pesticides and Veterinary Medicines Authority approval number: 47841

15) OTHER INFORMATION

Date of revision: 1 December 2016
Reason for revision: Upgrading to GHS format.

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including in conjunction with other products.

END OF MSDS