SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** DURACELL PROCELL PROFESSIONAL ALKALINE BATTERIES  
**Product Identification:** Procell Alkaline Manganese Dioxide Batteries – Duracell Designations: PC1300; PC1400; PC1500; PC2400; PC903; PC908; PC915; PC926; PC1604; PC9100, PC7K67  
**Product Use:** Energy Source  
**MSDS Date of Preparation:** July 1, 2008

**Company Identification:**  
Australia Office  
Duracell Australia Pty Ltd  
Procter & Gamble Australia Pty Ltd  
Levels 3 & 4  
1 Innovation Road  
Macquarie Park, NSW, 2113  
Australia  
Telephone: 1800 641 820  
FAX Number: (02) 8864 5319

New Zealand Office  
Procter & Gamble Distributing NZ  
Unit 3, 62 Paul Matthews Road  
Albany, Auckland, New Zealand  
Telephone: 0800 108 909

US Office  
Duracell, a division of P&G  
Berkshire Corporate Park  
Bethel, CT 06801 USA  
Telephone: (203) 796-4000

Australian Poisons Information Centre (24 hour service): -13 1126  
New Zealand Poisons Information Centre: 0800 764766  
INFOTRAC 24-HOUR Emergency Response Hotline 1-352-323-3500 (United States of America)

SECTION 2: HAZARDS IDENTIFICATION

**Physical Appearance:** Cylindrical battery.  
CAUTION: May explode or leak, and cause burn injury, if recharged, disposed of in fire, mixed with a different battery type, inserted backwards or disassembled. Replace all used batteries at the same time. Do not carry batteries loose in your pocket or purse. Do not remove the battery label.

**Australia Hazard Classification:** Non-Hazardous Substance. Non-Dangerous Goods.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Amount</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese Dioxide</td>
<td>1313-13-9</td>
<td>35-40%</td>
<td>Xn, R20/22</td>
</tr>
<tr>
<td>Zinc</td>
<td>7440-66-6</td>
<td>10-25%</td>
<td>N, R50/53</td>
</tr>
<tr>
<td>Potassium Hydroxide (35%)</td>
<td>1310-58-3</td>
<td>5-10%</td>
<td>C, Xn, R22, R35</td>
</tr>
<tr>
<td>Graphite (natural or synthetic)</td>
<td>7782-42-5, 7440-44-0</td>
<td>1-5%</td>
<td>None</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES
General Advice: The chemicals and metals in this product are contained in a sealed can. Exposure to the contents will not occur unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Damaged battery will release concentrated potassium hydroxide, which is caustic. Anticipated potential leakage of potassium hydroxide is 2 to 20 mL, depending on battery size. A similar amount of zinc may also leak.

Eye Contact: If battery is leaking and material contacts the eye, flush thoroughly with copious amounts of running water for 30 minutes. Seek immediate medical attention.

Skin Contact: If battery is leaking and material contacts the skin, remove any contaminated clothing and flush exposed skin with copious amounts of running water for at least 15 minutes. If irritation, injury or pain persists, seek medical attention.

Inhaled: If battery is leaking, contents may be irritating to respiratory passages. Move to fresh air. If irritation persists, seek medical attention.

Swallowed: If battery contents are swallowed, do not induce vomiting. If the victim is alert, have them rinse their mouth and the surrounding skin with water for at least 15 minutes. Seek immediate medical attention.

Note: This MSDS does not include or address the small button cell batteries which can be ingested.

SECTION 5: FIRE FIGHTING MEASURES

Fire and Explosion Hazards: Batteries may burst and release hazardous decomposition products when exposed to a fire situation.

Extinguishing Media: Use any extinguishing media that is appropriate for the surrounding fire.

Special Fire Fighting Procedures: Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Fight fire from a distance or protected area. Cool fire exposed batteries to prevent rupture. Use caution when handling fire-exposed containers (containers may rocket or explode in heat of fire).

Hazardous Combustion Products: Thermal degradation may produce hazardous fumes of zinc and manganese; hydrogen gas, caustic vapors of potassium hydroxide and other toxic by-products.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Clean-up personnel should wear appropriate protective clothing to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in an appropriate container for disposal.

SECTION 7: HANDLING AND STORAGE

Avoid mechanical or electrical abuse. DO NOT short circuit or install incorrectly. Batteries may explode, pyrolize or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions. Do not mix battery systems, such as alkaline and zinc carbon, in
the same equipment. Replace all batteries in equipment at the same time. Do not carry batteries loose in a pocket or bag. Do not remove the battery label.

**Storage:** Store batteries in a dry place at normal room temperature. Do not refrigerate – this will not make them last longer.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

The following occupational exposure limits are provided for informational purposes. No exposure to the battery components should occur during normal consumer use.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Australia Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manganese Dioxide</td>
<td>1 mg/m3 TWA</td>
</tr>
<tr>
<td>Zinc</td>
<td>None established for zinc metal</td>
</tr>
<tr>
<td>Potassium Hydroxide</td>
<td>2 mg/m3 Peak</td>
</tr>
<tr>
<td>Graphite</td>
<td>3 mg/m3 TWA</td>
</tr>
</tbody>
</table>

**BEI:** No biological limited allocated.

**Ventilation:** No special ventilation is needed for normal use.

**Respiratory Protection:** None required for normal use.

**Skin Protection:** None required for normal use. Use neoprene, rubber or latex gloves when handling leaking batteries.

**Eye Protection:** None required for normal use. Wear safety goggles when handling leaking batteries.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** Cylindrical battery.

- **Specific Gravity:** Not applicable
- **Water Solubility:** Insoluble
- **Vapor Pressure:** Not applicable
- **Vapor Density:** Not applicable
- **Boiling Point:** Not applicable
- **Melting Point:** Not applicable
- **Flash Point:** Not applicable
- **Autoignition Point:** Not applicable

### SECTION 10: STABILITY AND REACTIVITY

**Stability:** This product is stable.

**Incompatibility/Conditions to Avoid:** Contents are incompatible with strong oxidizing agents. Do not heat, crush, disassemble, short circuit or recharge.

**Hazardous Decomposition Products:** Thermal decomposition may produce hazardous fumes of zinc and manganese; caustic vapors of potassium hydroxide and other toxic by-products.

**Hazardous Polymerization:** Will not occur

### SECTION 11: TOXICOLOGICAL INFORMATION
**Potential Health Effects:**

The chemicals and metals in this product are contained in a sealed can. Exposure to the contents will not occur unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Damaged battery will release concentrated potassium hydroxide, which is caustic. Anticipated potential leakage of potassium hydroxide is 2 to 20 mL, depending on battery size. A similar amount of zinc may also leak.

**Eye Contact:** Contact with battery contents may cause severe irritation and burns. Eye damage is possible.

**Skin Contact:** Contact with battery contents may cause severe irritation and burns.

**Inhalation:** Inhalation of vapors or fumes released due to heat or a large number of leaking batteries may cause respiratory and eye irritation.

**Ingestion:** Swallowing is not anticipated due to battery size. Choking may occur if smaller AAA batteries are swallowed. Ingestion of battery contents (from a leaking battery) may cause mouth, throat and intestinal burns and damage.

**Acute Toxicity Data:**
Manganese Dioxide: LD50 oral rat >3478 mg/kg
Potassium Hydroxide: LD50 oral rat 273 mg/kg

**Chronic Effects:** The chemicals in this product are contained in a sealed can and exposure does not occur during normal handling and use. No chronic effects would be expected from handling a leaking battery.

**Target Organs:** Skin, eyes and respiratory system.

**Carcinogenicity:** None of the components of this product are listed as carcinogens by the Australian HSIS, ACGIH, IARC, the US NTP or the EU Directive.

---

**SECTION 12: ECOLOGICAL INFORMATION**

No ecotoxicity data is available. This product is not expected to present an environmental hazard.

**SECTION 13: DISPOSAL INFORMATION**

Disposal should be in accordance with national and local regulations. Alkaline batteries can be safely disposed of with normal household waste. Due to concerns about mercury in the municipal solid waste stream, Duracell has voluntarily eliminated all of the added mercury from its alkaline batteries since 1993. Individual consumers may dispose of spent (used) batteries with household trash. Duracell does not recommend that spent batteries be accumulated and disposed of in large quantities. Do not incinerate for disposal except in a controlled incinerator.

Some communities offer recycling or collection of alkaline batteries – contact your local government for disposal practices in your area.

**SECTION 14: TRANSPORT INFORMATION**

GMEL # 2000.3-AU
Page 4 of 5
Products covered by this MSDS, in their original form, are considered “dry cell” batteries and are not regulated for transportation as “DANGEROUS GOODS.” The batteries must be packaged in a manner that prevents the generation of heat and short circuits.

For finished packaged product transported by ground (US DOT): – not regulated
For finished packaged product transported by sea (IMDG) – not regulated
For finished packaged product transported by air (IATA): – not regulated

## SECTION 15: REGULATORY INFORMATION

**Poisons Schedule Number:** None

**Australian Inventory of Chemical Substances:** These products are manufactured articles and not subject to chemical notification requirements.

**Australian Workplace Labeling:** None Required
Labeling is not required because batteries are classified as articles and as such are exempt from the requirement for labeling.

## SECTION 16: OTHER INFORMATION

**P&G Hazard Rating:** Health: 0 Fire: 0 Reactivity: 0

**AU Classes and Risk Phrases for Reference (See Sections 2 and 3)**
- C Corrosive
- N Dangerous for the Environment
- Xn Harmful
- R20/22: Harmful by inhalation and if swallowed.
- R22: Harmful if swallowed.
- R35: Causes severe burns
- R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Data supplied is for use only in connection with occupational safety and health.

**DISCLAIMER:** This MSDS is intended to provide a brief summary of our knowledge and guidance regarding the use of this material. The information contained here has been compiled from sources considered by Procter & Gamble to be dependable and is accurate to the best of the Company’s knowledge. It is not meant to be an all-inclusive document on worldwide hazard communication regulations.

This information is offered in good faith. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage or release to the environment. Procter & Gamble assumed no responsibility for injury to the recipient or third persons, or for any damage to any property resulting from misuse of the product.