

# Product Safety Data Sheet

**EXELL BATTERY**

1-800-515-2423 USA/CAN  
www.exellbattery.com

Alkaline Manganese Batteries  
August 2012

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

|                         |                    |                             |               |
|-------------------------|--------------------|-----------------------------|---------------|
| <b>Product Name:</b>    | Exell Battery      | <b>Type No:</b>             | <b>Volts:</b> |
| <b>Trade Names:</b>     | Exell              | <b>Approximate Weight:</b>  | Varies        |
| <b>Chemical System:</b> | Alkaline Manganese | <b>Design for Recharge:</b> | NO            |

BatteriesInAFlash.com, Inc.  
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Telephone Number for Information  
800-515-2423 (USA/CANADA)

Date Prepared: August 2012

## SECTION 2 – HAZARDS IDENTIFICATION

Under normal conditions of use, the battery is sealed.

**Ingestion:** Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

**Inhalation:** Contents of an open battery can cause respiratory irritation.

**Skin Contact:** Contents of an open battery can cause skin irritation and/or chemical burns.

**Eye Contact:** Contents of an open battery can cause severe irritation and chemical burns.

## SECTION 3 - INGREDIENTS

**IMPORTANT NOTE:** The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

| Cell Designation                      |           | L1154   | L1142   | L1131   | L1121   |
|---------------------------------------|-----------|---------|---------|---------|---------|
| Hazardous Components                  | CAS No.   | wt%     | wt%     | wt%     | wt%     |
| Zinc (Zn)                             | 7440-66-6 | 14.5    | 13.2    | 13.4    | 10.6    |
| Manganese Dioxide (MnO <sub>2</sub> ) | 1313-13-9 | 33.5    | 33.9    | 26.9    | 21.8    |
| Potassium Hydroxide (KOH)             | 1310-58-3 | 6       | 5.1     | 5.2     | 4.1     |
| Mercury (Hg)                          | 7439-97-6 | 0.497   | 0.467   | 0.463   | 0.376   |
| Cadmium (Cd)                          | 7440-43-9 | < 0.001 | < 0.001 | < 0.001 | < 0.001 |
| Lead (Pb)                             | 7439-92-1 | 0.008   | 0.008   | 0.008   | 0.006   |

The battery contains the following non-hazardous materials; paper, plastic and other.

## SECTION 4 – FIRST AID MEASURES

**Ingestion:** Do not induce vomiting or give food or drink. Seek medical attention immediately. CALL NATIONAL BATTERY INGESTION HOTLINE for advice and follow-up (202-625-3333) collect day or night.

**Inhalation:** Provide fresh air and seek medical attention.

**Skin Contact:** Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

**Eye Contact:** Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

## SECTION 5 - FIRE FIGHTING MEASURES

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

To cleanup leaking batteries:

**Ventilation Requirements:** Room ventilation may be required in areas where there are open or leaking batteries.

**Eye Protection:** Wear safety glasses with side shields if handling an open or leaking battery.

**Gloves:** Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak-proof container.

## SECTION 7 - HANDLING AND STORAGE

**Storage:** Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

**Handling:** Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

**Charging:** This battery is manufactured in a charged state. It is not designed for recharging. Recharging can cause battery leakage or, in some cases, high-pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

**Labeling:** If the Eveready Battery label or package warnings are not visible, it is important to provide a package and/or device label stating:

**WARNING:** do not install backwards, charge, put in fire, or mix with other battery types. May explode or leak causing injury.

**Replace all batteries at the same time.** Where accidental ingestion of small batteries is possible, the label should include: Keep away from small children. If swallowed, promptly see doctor.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**Ventilation Requirements:** Not necessary under normal conditions.

**Respiratory Protection:** Not necessary under normal conditions.

**Eye Protection:** Not necessary under normal conditions.

**Gloves:** Not necessary under normal conditions.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical State and Appearance: Solid, Button in Paper Tube

**Odor:** Odorless

**Melting Point (°C):** N/A

**Boiling Point (°C):** N/A

**Vapor Pressure (kPa):** N/A

**Critical Temperature (°C):** N/A

**Partition Coefficient:** N/A

**Ignition Temperature (°C):** N/A

**Solubility in Water:** N/A

**pH:** N/A

**Specific Gravity (H<sub>2</sub>O=1):** N/A

**Vapor Density (Air=1):** N/A

**Heat of Combustion (kJ/mol):** N/A

**Critical Pressure (MPa):** N/A

**Flash Point (°C):** N/A

**Explosion Limit % (V/V):** N/A

**Solubility in Other Solvents:** N/A

## SECTION 10 – STABILITY AND REACTIVITY

**Stability:** Stable

**Incompatibility:** Reactive with strong oxidizing agents

**Condition to Avoid:** Avoid shorting, mechanical & thermal abuse

**Hazardous Polymerization:** Will not occur

**Hazardous Decomposition:** None

## SECTION 11 – TOXICOLOGICAL INFORMATION

**Note:** Since the materials in this battery are sealed in the can, the potential for exposure to the components of the battery is negligible, when the battery is used as directed. However technical or electrical abuse of the battery may result in the release of battery contents.

**Toxicity to Animals:** Not applicable

**Chronic Effects on Human:** Not applicable

## SECTION 12 – ECOLOGICAL INFORMATION

This product has not been tested for environmental effects.

## SECTION 13 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state and local regulations.

## SECTION 14 – TRANSPORT INFORMATION

Alkaline Zinc Manganese Dioxide Dry Battery is unregulated for purpose of transportation by U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAA), International Air Transport Association (IATA) and the International Maritime Dangerous Goods regulations (IMDG). The only DOT requirement for shipping these batteries is Special Provision 130 which states: "Batteries, dry, are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals)." The only requirements for shipping these batteries by ICAO and IATA is Special Provision A123 which states: "An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden

from transportation. "The International Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says: "Batteries, dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provisions of this Code provided the batteries are securely packed and protected against short-circuits. Examples of such batteries are: alkaline-manganese, zinc-carbon, nickel metal hydride and nickel-cadmium batteries" The requirements for shipping these batteries, in all modes of transportation, are that they be separated from each other to prevent short-circuits and to prevent movement that could lead to short-circuits. Products must also be packed in strong packaging that can withstand the rigors normal to transportation.

**SECTION 15 - REGULATORY INFORMATION**

**Main Chemical Limitation of EEC, RoHS, TCLP & US Public Law**

| Chemical     | EEC<br>(2006_66_EC)<br>wt% | RoHS**<br>(2002_95_EC)<br>mg/kg | TCLP (Toxic<br>Characteristics<br>Leaching Procedure)<br>mg/kg | US Public Law***<br>mg/cell |
|--------------|----------------------------|---------------------------------|--|-----------------------------|
| Mercury (Hg) | <0.0005%*                  | 1000mg/kg                       | 0.2  | 25                          |
| Cadium (Cd)  | <0.002%                    | 100mg/kg                        | 1  | -                           |
| Lead (Pb)    | <0.4%                      | 1000mg/kg                       | 5  | -                           |

**Notes:**

\* Button cells with a mercury content of no more than 2% by weight is exempted (Article 4, 2006/66/ec)

\*\* Quoted limit is referred to RoHS Directive 2002/95EC and 2005/618/EC. According to the Alkaline Manganese Button Cell Page 4 of 4 Date Prepared: 2008/09/11 document of Frequently Asked Questions on RoHS and WEEE published from European Commission in May 2005, the battery does not apply to RoHS Directive.

\*\*\* According to the US Mercury-Containing Battery Management Act. Public Law No.104-142 (1996) SEC 204 Zinc-Carbon battery should not contains mercury that was intentionally introduced.

**SECTION 16 - OTHER INFORMATION**

Do not heat or dispose of in fire. Do not recharge or disassemble the battery. All information contained here within this document is based on the cells that compose the final assembled battery.

**Notice to reader:**

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