



## Safety Data Sheet

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Product Name:** DURACELL® ALKALINE BATTERIES  
**Product Identification:** Alkaline Manganese Dioxide Cells –  
**Tradenames:** Plus, Ultra, Simply

**Product Use:** Energy Source

**SDS Date of Preparation:** November 2, 2009; Updated May 19, 2010

#### Duracell Designations:

Name/Size	Duracell Designation	Voltage	IEC Designation
Duracell Plus/Simply D	MN1300	1,5	LR20
Duracell Ultra D	MX1300	1,5	LR20
Duracell Plus/Simply C	MN1400	1,5	LR14
Duracell Ultra C	MX1400	1,5	LR14
Duracell Plus/Simply AA	MN1500	1,5	LR6
Duracell Ultra AA	MX1500	1,5	LR6
Duracell Plus/Simply AAA	MN2400	1,5	LR03
Duracell Ultra AAA	MX2400	1,5	LR03
Duracell Plus/Simply 9V	MN1604	9	6LR61
Duracell Ultra 9V	MX1604	9	6LR61
Duracell 4.5V	MN1203	4,5	3LR12
Duracell AAAA	MN2500	1,5	
Duracell MN11	MN11	6	
Duracell MN9100 N	MN9100	1,5	LR1
Duracell 7K67 J	7K67J	6,2	4LR61

#### Company Identification:

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##### US Office

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**Emergency Phone Number:** INFOTRAC 24-Hour Emergency Response Hotline: 1-352-323-3500  
(United States of America)

### SECTION 2: HAZARDS IDENTIFICATION

**Physical Appearance:** Copper top 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.

EU Classification of Preparation: Not classified as a dangerous preparation.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	EINECS Number	Amount	Classification
Manganese Dioxide	1313-13-9	215-202-6	35-40 %	Xn, R20/22
Zinc	7440-66-6	231-175-3	10-25 %	N, R50/53
Potassium Hydroxide (35 %)	1310-58-3	215-181-3	5-10 %	C, Xn, R22, R35
Graphite (natural or synthetic)	7782-42-5, 7440-44-0	231-955-3 231-153-3	1-5 %	None

Note: Some Duracell alkaline batteries contain a Duracell Power Check™ battery energy gauge, which is a small conductive strip located underneath the PVC battery label that indicates the amount of charge in the battery. It is composed of minute quantities of conductive materials. Due to the small quantity of materials and their solid form, a health or environmental risk is unlikely.

### 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.

**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 advice.

**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 advice.

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

**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 SDS 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, pyrolyze 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 battery tester or 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. **Refer to specific country regulations for additional exposure limit information.**

Chemical Name	Exposure Limits
Manganese Dioxide	0,5 mg/m <sup>3</sup> TWA UK WEL 0,5 mg/m <sup>3</sup> TWA (inhalable) DFG MAK 0,2 mg/m <sup>3</sup> VL Belgium 0,2 mg/m <sup>3</sup> TWA Denmark LV
Zinc	None established for zinc metal
Potassium Hydroxide	2 mg/m <sup>3</sup> STEL UK WEL 2 mg/m <sup>3</sup> VCD Belgium 2 mg/m <sup>3</sup> Ceiling Denmark LV
Graphite	4 mg/m <sup>3</sup> TWA UK WEL (respirable dust) 10 mg/m <sup>3</sup> TWA UK WEL (inhalable dust) 1,5 mg/m <sup>3</sup> TWA DFG MAK (respirable dust) 4 mg/m <sup>3</sup> TWA DFG MAK (inhalable dust) 2 mg/m <sup>3</sup> VL Belgium (respirable dust)

**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:** Copper top battery.

**Water Solubility:** Insoluble

## 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.

**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 EU Directive on the classification and labeling of substances.

**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. Do not incinerate except for disposal in a controlled incinerator.

Duracell alkaline manganese dioxide batteries are labeled in compliance with EU Battery Directive 2006/66.

**SECTION 14: TRANSPORT INFORMATION**

**Transportation Information** – Products covered by this SDS, in their original form, are considered “dry cell” batteries and are not regulated as “DANGEROUS GOODS” for transportation.

For finished packaged product transported by ground (ADR/RID): – 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**

**EU Classification of Preparation:** Not classified as a dangerous preparation.

**REACH:** These products are manufactured articles and not subject to REACH registration requirements.

**EU Labeling:** None Required

Labeling is not required because batteries are classified as articles under the both REACH and the Dangerous Preparations Directive and as such are exempt from the requirement for labeling.

**SECTION 16: OTHER INFORMATION**

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

EU 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.

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

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