

# GP Batteries

## Safety Data Sheet for Cylindrical Alkaline Battery

Document Number: SDS100

Revision: 04

Date of prepared: 17 Sep 2019

### Section I – Product and Company Identification

#### Information of Product

<b>Product Identity (used on the label)</b>	Cylindrical Alkaline Battery
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#### Information of Manufacturer

##### Manufacturer's Name

GPI International Ltd.

##### Emergency Telephone Number

Within USA &amp; Canada call: +1-800-424-9300

Outside USA and Canada call: +1-703-527-3887

##### Address (Number, Street, City State, and ZIP Code)

7/F, Building 16W, 16 Science Park West Avenue  
Hong Kong Science Park, New Territories, Hong Kong

##### Telephone Number for Information

+852-24843333

##### Date of prepared and revised

17 September, 2019

#### Recommended use of chemicals:

N.A.

### Section II – Hazards Identification

#### Hazards identifications

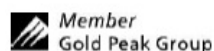
General advice: The common known rules for handling of chemicals should be obeyed. These chemicals are contained in a sealed steel can. For consumer use, adequate hazard warnings are printed on both the package and the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically or electrically abused. Concentrated potassium hydroxide contained is caustic. Anticipated potential leakage of potassium hydroxide is 2-20 ml, depending on battery size. Do not eat and drink batteries. Keep batteries away from small children.

**Physical-Chemical Hazards:** This preparation is not classified as dangerous according to the criteria of directive 99/45/EEC.

**Hazards to man:** If battery leaking, exposure to caustic ingredients may occur. Therefore, may cause sensitization by skin contact.

**Hazards to environment:** N.A.

Remark: "N.A." is indicated if not applicable.



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### Section III – Composition/Information on Ingredients

#### Chemical Nature: Alkaline zinc-manganese dioxide batteries

Ingredient	CAS No.	%/wt
Manganese Dioxide (MnO <sub>2</sub> )	1313-13-9	40.6 ~ 42.6
Zinc (Zn)	7440-66-6	14.8 ~ 17.4
Water (H <sub>2</sub> O)	7732-18-5	11.0 ~ 12.2
Potassium Hydroxide (KOH)	1310-58-3	4.8 ~ 7.0
Graphite	7782-42-5	1.7 ~ 3.4
Brass	12597-71-6	0.8 ~ 3.0
Steel	12597-69-2	15.7 ~ 20.4
Ni-plating	7440-02-0	0.2 ~ 0.3
Nylon-66	32131-17-2	1.4 ~ 1.6
Polyvinyl Alcohol Fiber (PVA)	9002-89-5	0.6 ~ 0.9
Mercury (Hg)	7439-97-6	<0.0001
Lead (Pb)	7439-92-1	<0.0030
Cadmium (Cd)	7440-43-9	<0.0003
Arsenic (As)	7440-38-2	<0.0001

### Section IV – First-aid Measures

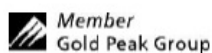
**Inhalation:** In case of excessive inhalation due to leaking batteries remove to fresh air. Obtain medical advice.

**Skin Contact:** If exposed to a leaking battery, remove contaminated clothing. Wash exposed areas with plenty of water and soap. If irritation occurs, consult a physician.

**Eye contact:** If a battery is leaking and materials contact eyes, flush immediately with running water for at least 15 minutes. Consult an ophthalmologist at once.

**Ingestion:** Not anticipated due to size of batteries. Choking may occur with the smaller size batteries. If exposed to a

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leaking battery, rinse mouth and surrounding areas with running water for at least 15 minutes. Give plenty of water to drink. Do not induce vomiting. Obtain medical advice.

### Section V – Fire-fighting Measures

**Suitable extinguishing media:** Carbon dioxide (CO<sub>2</sub>), foam, dry chemical powder.

**Extinguishing media not to be used:** Never use a direct water jet.

**Exposure hazards from combustion products:** In case of fire, carbon dioxide, carbon monoxide and other toxic organic substances will be generated. Do not inhale fumes and smoke.

**Personal protective equipments:** Wear full protective clothing. Use self-contained breathing apparatus.

### Section VI – Accidental Release Measures

**Personal precautions:** Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and inhalation of vapours. Increase the ventilation. Wear protective clothing. Keep unprotected persons away.

**Environmental precautions:** Avoid discharge and penetration into sewerage systems, waterways, pits, and cellars.

**Methods for cleaning up:** Collect spilled material with an inert standard absorbent like sand or silica. Care for well-ventilated conditions. Recycle or dispose of the materials in an appropriate way.

### Section VII – Handling and Storage

#### General handling:

Obey the common known rules and precautions for handling with chemicals. Avoid mechanical and electrical abuse. Do not short battery or install incorrectly. Batteries may explode, pyrolyze or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries according to equipment instructions. Do not mix battery systems, such as alkaline and zinc-carbon. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Do not remove battery labels.

#### Storage:

Store product in well-filled, appropriate coated and tightly closed containers avoiding influence of oxygen/air, light and humidity. Storage at room temperature.

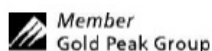
### Section VIII – Exposure Controls/Personal Protection

**Exposition/Technical measures:** Atmospheric vapour concentrations must be minimized by adequate ventilation.

**Protection of hands, eyes and skin:** None required under normal use conditions. When handling leaking batteries, use neoprene, rubber or nitrile gloves and wear safety glasses to protect hands, eyes and skin.

**General safety and hygiene measures:** Use only as directed.

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### Section IX – Physical and Chemical Properties

Physical state: Stainless steel top battery

Colour: Contents dark and gray in colour

Odour: N.A.

Melting point: N.A.

Boiling point: N.A.

Flash point: N.A.

Explosion limit: Not available

Ignition temperature: Not available

Vapour pressure: Not available

Specific gravity: N.A.

Solubility in water: N.A.

Solubility in other solvents: N.A.

PH value: Not available

Partition coefficient: Not available

Viscosity: Not available

### Section X – Stability and Reactivity

Thermal decomposition: Batteries may burst and release hazardous decomposition products when exposed to fire.

Substances to avoid: Strong oxidation agents.

Hazardous reactions: Contents incompatible with strong oxidizing agents.

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

### Section XI – Toxicological Information

Toxicity information is available on the battery ingredients noted in Section III, but in general, N.A. to intact batteries

Chronic health effects: N.A.

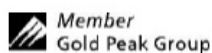
### Section XII – Ecological Information

Not available.

### Section XIII – Disposal Considerations

**Product:** Dispose in accordance with appropriate regulations. If in doubt, contact your local government office concerned for information. Do not incinerate, since batteries may explode at excessive temperatures.

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### Section XIV – Transport Information

Road (ADR/RID): Not regulated

Air (ICAO/IATA):

IATA DGR : Special Provision A123: “Examples of such batteries are: alkali-manganese, zinc-carbon, nickel-metal hydride and nickel-cadmium batteries. Any electrical battery ... having the potential of a dangerous evolution of heat must be prepared for transport as to prevent (a) a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals...) is forbidden from transport; and (b) accidental activation. The words “Not Restricted” and the Special Provision number must be included in the description of the substance on the Air Waybill as required by 8.2.6, when an Air Waybill is issued.”

Sea (IMDG):

IMDG CODE: 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”

These batteries are not regulated by international agencies as hazardous materials or dangerous goods when shipped. A shipping name of “Alkaline Batteries – Non-hazardous” may be used on all domestic and international bills of lading.

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in “strong outer packaging” that prevents spillage of contents. All original packaging for GP alkaline batteries has been designed to be compliant with these regulatory concerns.

### Section XV – Regulatory Information

Symbol: N.A.

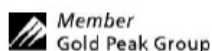
EC labeling: None

Risk phrases: None

Safety phrases: None

Labeling is not required because cylindrical alkaline batteries are classified as “ articles “ under the Dangerous Preparations Directive and as such are exempt from the requirements of the Directive.

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## **Safety Data Sheet for Cylindrical Alkaline Battery**

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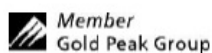
Date of prepared: 17 Sep 2019

### **Section XVI – Other Information**

The information on this Safety Data Sheet (SDS) was obtained from current and reputable sources. However, the data is provided without any warranty; expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to assume liability on loss, injury, damage, or expense resulting from improper use of this product. Any previous MSDS of this product mentioned above are hereby replaced with this new document. We urge you to make this information available as appropriate in your organization and to any others with whom you arrange to handle this product.

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Remark: "N.A." is indicated if not applicable.



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## **ARTICLE INFORMATION SHEET**

This Article Information Sheet (AIS) provides relevant battery information to retailers, consumers, OEMs and other users requesting a GHS-compliant SDS. Articles, such as batteries, are exempt from GHS SDS classification criteria. The GHS criteria is not designed or intended to be used to classify the physical, health and environmental hazards of an article. Branded consumer batteries are defined as electro-technical devices. The design, safety, manufacture, and qualification of Energizer and Rayovac branded consumer batteries follow ANSI and IEC battery standards.

### **SECTION 1 - DOCUMENT INFORMATION**

**Product Name:** Eveready / Energizer Battery / Rayovac

**Document Number:** 1019-Alk

**Chemical System:** Alkaline Manganese Dioxide-Zinc

**Date Prepared:** October 2019

**Designed for Recharge:** No

**Valid Until:** October 2022

**Prepared by:** Energizer

### **SECTION 2 – COMPANY INFORMATION**

Energizer Brands, LLC  
533 Maryville University Drive  
St. Louis, MO 63141

Email for Information:  
[energizer@custhelp.com](mailto:energizer@custhelp.com)  
[www.energizer.com](http://www.energizer.com)

### **SECTION 3 – ARTICLE INFORMATION**

Description	Alkaline Manganese Dioxide-Zinc Battery
Use	Portable power source
Brand	ENERGIZER, EVEREADY, RAYOVAC
IEC Designation	Included but not limited to: LR8D425, LR03, LR6, LR14, LR20, 6LR61, LR1, 4LR25Y, 6LF22
Sizes	Included but not limited to: AAAA, AAA, AA, C, D, 9V, N, Lantern
Image	

# Article Information Sheet

## SECTION 4 – ARTICLE CONSTRUCTION

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

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	15 mg/m <sup>3</sup> TWA (total dust) 5 mg/m <sup>3</sup> TWA (respirable fraction)	2 mg/m <sup>3</sup> TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m <sup>3</sup> Ceiling (as Mn)	0.2 mg/m <sup>3</sup> TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m <sup>3</sup> Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m <sup>3</sup> TWA PNOR* (total dust) 5 mg/m <sup>3</sup> TWA PNOR* (respirable fraction)	10 mg/m <sup>3</sup> TWA PNOC** (inhalable particulate) 3 mg/m <sup>3</sup> TWA PNOC** (respirable particulate)	12-25
Non-Hazardous Components			
Steel (iron CAS# 7439-89-6)	None established	None established	18-22
Water, Paper, Plastic and Other	None established	None established	Balance

\* PNOR: Particulates not otherwise regulated

\*\*PNOC: Particulates not otherwise classified

**All Energizer Alkaline Manganese Dioxide-Zinc have zero added mercury.**

### Applicable Battery Industry Standards

<b>North America Standards</b>	ANSI C18.1M Part 1	ANSI C18.1M Part 2	ANSI C18.4
<b>International Standards</b>	IEC 60086-1	IEC 60086-2	IEC 60086-5

## SECTION 5 – HEALTH AND SAFETY

**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.

The following instructions apply to exposure of internal components.

**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 6 – FIRE HAZARD & FIREFIGHTING

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 7 - HANDLING AND STORAGE

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

**Mechanical Containment:** Designers of any water or air-tight device should be aware of the normal evolution of hydrogen gas from alkaline batteries. This gas must be either absorbed or allowed to escape to avoid a potential safety issue.

**Handling:** Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy through heating, 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.

Soldering directly to a battery is not recommended. If welding to the battery is required, consult your Energizer sales representative for proper precautions to prevent seal damage or short circuit.

**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:** The label acts as an electrical insulation for the battery can. Damage to the label can increase the potential for a short circuit.

**WARNING:** Do not install backwards, charge, put in fire, or mix with other battery types as it may explode or leak causing injury.

**Replace all batteries at the same time.**

## SECTION 8 – DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state and local regulations. Appropriate disposal technologies include incineration and land filling.

## SECTION 9 – TRANSPORT INFORMATION

In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for Energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, the IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulations, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirements contained in the following special provisions.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA	A123
ICAO	Not regulated

All Energizer alkaline batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

For emergency information call ChemTel 1-800-526-4727 (North America) or 1-314-985-1511 (International).

## SECTION 10 – REGULATORY INFORMATION

### **10A Battery**

1. **SARA/TITLE III:** As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act.
2. **USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996:** No mercury added
3. **EU Battery Directive 2006/66/EC Amended 2013/56/EU:** Energizer batteries are compliant with all aspects of the Directive

### **10B General**

1. **CPSIA 2008:** Exempt
2. **US CPSC FHSA (16 CFR 1500):** Not applicable since batteries are defined as articles
3. **USA EPA TSCA (40 CFR 707.20):** Not applicable since batteries are defined as articles
4. **USA EPA RCRA (40 CFR 261):** Classified as non-hazardous waste per ignitable, corrosive, reactive or toxicity testing
5. **California Prop 65:** No warning required
6. **DTSC Perchlorate labeling:** No warning required
7. **EU REACH SVHC:** No REACH listed substances of very high concern are present above 0.01% w/w

### **10C Article Definitions**

1. **OSHA Hazard Communication Standard, Section 1910.1200(c)**

## SECTION 11 – GHS OTHER INFORMATION

None

## Acronym Glossary

[ANSI:](#) American National Standards Institute  
[CPSC:](#) Consumer Product Safety Commission  
[CPSIA:](#) Consumer Product Safety Improvement Act  
[DTSC:](#) Department of Toxic Substances Control  
[EPA:](#) Environmental Protection Agency  
[FHSA:](#) Federal Hazardous Substances Act  
[GHS:](#) Globally Harmonized System for Hazard Communication  
[IEC:](#) International Electrotechnical Commission  
[OSHA:](#) Occupational Safety and Health Administration  
[RCRA:](#) Resource Conservation and Recovery Act  
[SDS:](#) Safety Data Sheet  
[SVHC:](#) Substances of Very high Concern  
[TSCA:](#) Toxic Substances Control Act

*Energizer has prepared copyrighted Article Information Sheets to provide information on the different Eveready/Energizer/Rayovac battery systems. Batteries are articles as defined under the GHS and exempt from GHS classification criteria (Section 1.3.2.1.1 of the GHS). The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, ENERGIZER BRANDS, LLC MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.*