

**PRODUCT SAFETY DATA SHEET****PRODUCT NAME:** Energizer Battery**Type No:****Volts:** 1.5 /cell**TRADE NAMES:** Energizer Miniature Alkaline**CHEMICAL SYSTEM:** Alkaline Manganese Dioxide-Zinc (OHg)**Designed for Recharge:** No**Document Number:** 12001-A

Energizer has prepared copyrighted Product Safety Datasheets to provide information on the different Eveready/Energizer 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 BATTERY MANUFACTURING, INC. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.

**SECTION 1 - MANUFACTURER INFORMATION**Energizer Battery Manufacturing, Inc.  
25225 Detroit Rd.  
Westlake, OH 44145Telephone Number for Information:  
800-383-7323 (USA / CANADA)

Date Prepared: January 2017

**SECTION 2 – HAZARDS IDENTIFICATION****GHS classification:** N/A**Signal Word:** N/A**Hazard Classification:** N/A

Under normal conditions of use, the battery is hermetically 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.

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)	1-3
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)	15-30
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m <sup>3</sup> Ceiling	0-12
Sodium Hydroxide (CAS# 1310-73-2)	2 mg/m <sup>3</sup> TWA	2 mg/m <sup>3</sup> Ceiling	0-12
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)	4-10

Non-Hazardous Components			
Steel (Iron CAS# 65997-19-5)	None established	None established	30 - 35
Water, Paper, Plastic and Other	None established	None established	Balance

\* PNOR: Particulates not otherwise regulated

\*\*PNO: Particulates not otherwise classified

**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.

**Mechanical Containment:** If potting or sealing the battery in an airtight or watertight container is required, consult your Energizer Battery Manufacturing, Inc. representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air, can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high pressure rupture.

**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.

If soldering or welding to the battery is required, consult your Energizer Battery Manufacturing, Inc. 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:** If the Eveready / Energizer 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; have doctor phone (202) 625-3333 collect

**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**

Appearance (physical state, color, etc.):	Solid object
Upper Explosive Limits:	Not applicable for an Article
Lower Explosive Limits	Not applicable for an Article
Odor	No odor
Vapor Pressure (mm Hg @ 25°C)	Not applicable for an Article
Odor Threshold	No odor
Vapor Density (Air = 1)	Not applicable for an Article
pH	Not applicable for an Article
Density (g/cm <sup>3</sup> )	3.0-4.2
Melting point/Freezing Point	Not applicable for an Article
Solubility in Water (% by weight)	Not applicable for an Article
Boiling Point @ 760 mm Hg (°C)	Not applicable for an Article
Flash Point	Not applicable for an Article
Evaporation Rate (Butyl Acetate = 1)	Not applicable for an Article
Flammability	Not applicable for an Article
Partition Coefficient	Not applicable for an Article
Auto-ignition Temperature	Not applicable for an Article
Decomposition Temperature	Not applicable for an Article
Viscosity	Not applicable for an Article

**SECTION 10 – STABILITY AND REACTIVITY**

Alkaline batteries do not meet any of the criteria established in 40 CFR 261.2 for reactivity.

**SECTION 11 – TOXICOLOGICAL INFORMATION**

Under normal conditions of use, alkaline batteries are non-toxic.

**SECTION 12 – ECOLOGICAL INFORMATION**

Issues such as ecotoxicity, persistence and bioaccumulation are not applicable for articles.

**SECTION 13 – DISPOSAL CONSIDERATIONS**

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

**SECTION 14 – 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.

**SECTION 15 - REGULATORY INFORMATION**

Batteries marketed by Energizer Battery Manufacturing, Inc. are not classified as dangerous goods by the US Department of Transportation or the major international regulatory bodies and are therefore not regulated.

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.

**SECTION 16 - OTHER INFORMATION**

None.

**PRODUCT DATASHEET**

**Energizer.**

1-800-383-7323 USA/CAN  
www.energizer.com

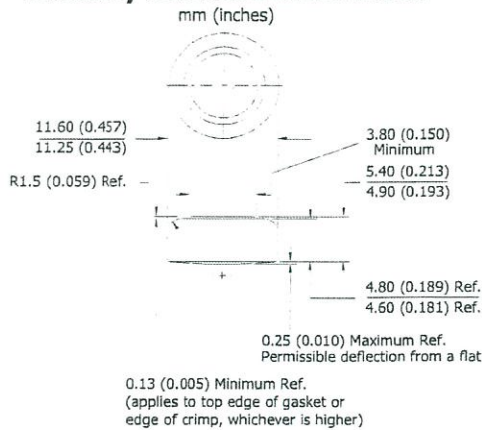
**ENERGIZER A76**

**ZEROMERCURY®**

**MINIATURE ALKALINE**



**Industry Standard Dimensions**



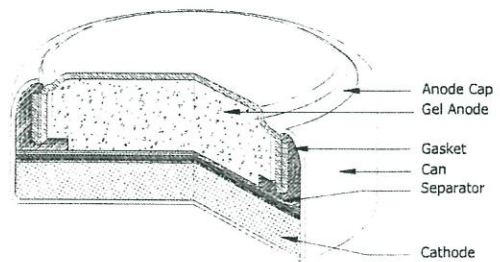
DESIGNED FOR ELECTRONIC APPLICATIONS WHICH MAY REQUIRE HIGH RATE PULSES

**Specifications**

**Chemical System:** Manganese Dioxide (MnO<sub>2</sub>)  
**Designation:** ANSI/NEDA 1166A, IEC-LR44  
**Nominal Voltage:** 1.5 Volts  
**Typical Capacity:** 153 mAh\* (to 0.9 volts)  
**Capacity Test:** 6.8K ohm continuous drain at 21°C (70°F)  
**Typical Weight:** 1.85 grams (0.07 oz.)  
**Typical Volume:** 0.57 cubic centimeters (0.035 cubic inch)  
**Impedance (40 Hz):** 1 to 5 ohms  
**Max Bulge:** This battery will bulge as it is discharged, but will not exceed the maximum height shown on the battery drawing.

\* Varies according to the applied load, temperature, and cutoff voltage.

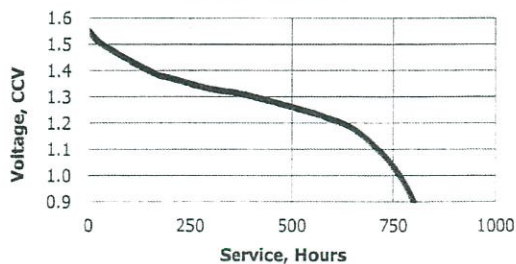
**Cross Section**



**Typical Discharge Characteristics**

Typical Performance at 21°C (70°F)

**Load:** 6.8K ohms - Continuous  
**Typical Drain @ 1.30V:** 0.191 mA  
**Hours to 0.9V:** 800



**Depth of Discharge**

Typical Performance at 21°C (70°F)

**Load:** 6.8K ohms - Continuous  
**Typical Drain @ 1.30V:** 0.191 mA  
**Hours to 0.9V:** 800

(as percent of capacity)

Temperature	0%	40%	80%
21°C (70°F)	1.55V	1.33V	1.20V

**Important Notice**

This datasheet contains typical information specific to products manufactured at the time of its publication.  
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