Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 01/22/2015 Reviewed on 01/22/2015

1 Identification

· **Product identifier**

· **Trade name: Li-MnO2 Button Cell**

· **Article number:** CR2032

· **Application of the substance / the mixture** Lithium-based battery product.

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Jintan Chaochuang Battery Company Limited
Xiyang Industrial Estate, Maolu Town
Jintan City, Jiangsu Province, China
Phone: +86-519-82483588
Fax: +86-755-29369623

· **Emergency telephone number:** +86-519-82483588

2 Hazard(s) identification

· **Classification of the substance or mixture**

GHS02 Flame

Water-react. 3 H261 In contact with water releases flammable gas.
· **Additional information:**
There are no other hazards not otherwise classified that have been identified.
0 percent of the mixture consists of ingredient(s) of unknown toxicity.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02

· **Signal word** Warning

· **Hazard-determining components of labeling:**
lithium
· **Hazard statements**
H261 In contact with water releases flammable gas.
· **Precautionary statements**
P280 Wear protective gloves and eye protection.
P370+P378 In case of fire: Use for extinction: Fire-extinguishing powder.
P402+P404 Store in a dry place. Store in a closed container.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Additional information:**
Information references exposures to battery contents, and not exposures to whole units. Exposures to whole units are unlikely to produce health hazards.

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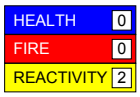
· **Hazard description:**
· **WHMIS-symbols:**
B6 - Reactive flammable material

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 0
Reactivity = 2

The substance demonstrates unusual reactivity with water.

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 2

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
1313-13-9	manganese dioxide STOT RE 2, H373 Acute Tox. 4, H302; Acute Tox. 4, H332	25-50%
7791-03-9	lithium perchlorate Ox. Sol. 1, H271 Acute Tox. 3, H301 Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	2.5-10%
108-32-7	propylene carbonate Eye Irrit. 2, H319	2.5-10%
7439-93-2	lithium Water-react. 1, H260 Skin Corr. 1B, H314	≤ 2.5%
110-71-4	1,2-dimethoxyethane Flam. Liq. 2, H225 Repr. 1B, H360 Acute Tox. 4, H332	≤ 2.5%

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· **Additional information:**
For the listed ingredients, the identity and exact percentages are being withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Information references exposures to battery contents, and not exposures to whole units. Exposures to whole units are unlikely to produce health hazards.
Immediately remove any clothing soiled by the product.
Take affected persons out into the fresh air.
· **After inhalation:**
Unlikely route of exposure.
Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Unlikely route of exposure.
Immediately rinse with water.
If skin irritation continues, consult a doctor.
Seek immediate medical help for blistering or open wounds.
· **After eye contact:**
Unlikely route of exposure.
Protect unharmed eye.
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Do not induce vomiting; immediately call for medical help.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **Danger** Danger of gastric perforation.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Fire-extinguishing powder
Sand
Water in flooding quantities.
· **For safety reasons unsuitable extinguishing agents:** None.
· **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
· **Advice for firefighters**
· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
· **Additional information**
Eliminate all ignition sources if safe to do so.

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Cool endangered receptacles with water in flooding quantites.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
If containers are leaking, use respiratory protective device against the effects of fumes/dust/aerosol.
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Use inert material (clay, sawdust, kaolin) to absorb material and sweep up. Prevent spilled material from entering sewers, drains, bodies of water.
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
Send for recovery or disposal in suitable receptacles.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Information is only applicable to product contents, and not to product as normally supplied. This information is applicable to damaged, leaking, or spilled product as contact with contents is possible under these conditions.
Keep away from open flames or temperatures exceeding manufacturer ratings. DO NOT ATTEMPT TO OPEN SEALED CELLS OR BATTERIES – BATTERY CONTENTS MAY PRESENT SERIOUS SAFETY AND HEALTH HAZARDS. SHORT-CIRCUITING THE TERMINALS OF A DEVICE MAY RESULT IN DAMAGE TO DEVICE AND ANY NEARBY OBJECTS OR PERSONNEL.
· **Information about protection against explosions and fires:**
Prevent impact and friction.
Substance/product is ignitable under certain conditions.

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a dry, well-ventilated place.
Do not use or store near open flame.
Avoid extreme temperatures; battery may rupture and release contents.
Do not store and transport with incompatible materials.
Store individual batteries or cells only in approved packaging in order to avoid inadvertent short circuits, as this may result in damage to device, nearby objects, personnel, or all of the above.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from water.
Do not store together with acids.

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· **Further information about storage conditions:**
Store in dry conditions.
Protect from humidity and water.
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
1313-13-9 manganese dioxide	
PEL (USA)	Ceiling limit value: 5 mg/m³ as Mn
REL (USA)	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ as Mn
TLV (USA)	Long-term value: 0.02* 0.1* mg/m³ as Mn; *respirable **inhalable fraction
EL (Canada)	Long-term value: 0.2 mg/m³ as Mn; R
LMPE (Mexico)	Long-term value: 0.2 mg/m³ como Mn
7782-42-5 Graphite	
PEL (USA)	Long-term value: 15 mppcf* mg/m³ *impinger samples counted by light field techn.
REL (USA)	Long-term value: 2.5* mg/m³ *respirable dust
TLV (USA)	Long-term value: 2* mg/m³ all forms except graphite fibers;*resp. fraction
EL (Canada)	Long-term value: 2 mg/m³ respirable
EV (Canada)	Long-term value: 2 mg/m³ respirable
LMPE (Mexico)	Long-term value: 2* mg/m³ *fracción respirable
110-71-4 1,2-dimethoxyethane	
EV (Canada)	Long-term value: 18 mg/m³, 5 ppm Skin

· **Additional information:** The lists that were valid during the creation were used as basis.

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· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Information is only applicable to product contents, and not to product as normally supplied. This information is applicable to damaged, leaking, or spilled product as contact with contents is possible under these conditions.
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
· **Engineering controls:** No further relevant information available.
· **Breathing equipment:**
Not required under normal conditions of use.
For spills, respiratory protection may be advisable.
· **Protection of hands:**
Not required under normal conditions of use.
Wear protective gloves to handle contents of damaged or leaking units.
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**


Safety glasses

· **Body protection:**
Not required under normal conditions of use.
Protection may be required for spills.
· **Limitation and supervision of exposure into the environment** Avoid release to the environment.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Impermeable container containing liquid and solid contents plus inert carrier materials.
Color:	Silver grey

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· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not determined.
· **Auto-ignition temperature:**	Not determined.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product does not represent an explosion hazard during normal use. Leaking contents may react with water to produce explosive or flammable gas.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure:**	Not applicable.
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity**
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
· **Possibility of hazardous reactions**
Hazardous reactions generally occur with contents of leaking batteries only.
Strong exothermic reaction with acids.
Toxic fumes may be released if heated above the decomposition point.
Reacts violently with water.

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Contact with water will cause spontaneous hydrolysis (Can be explosive!).
· **Conditions to avoid** Keep away from heat and direct sunlight.
· **Incompatible materials:** Reducing agents, combustible materials, moisture, contact with metals.
· **Hazardous decomposition products:**
Carbon monoxide and carbon dioxide
Contact with decomposition products does not normally occur; informaton is applicable only to damaged devices.
Flammable gases/vapors
Toxic metal oxide smoke
Chlorine compounds

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
110-71-4 1,2-dimethoxyethane		
Oral	LD50	5370 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** Strong caustic effect in case of contact with electroyte only.
· **on the eye:** Strong caustic effect in case of contact with electroyte only.
· **Sensitization:** No sensitizing effects known.
· **Subacute to chronic toxicity:** No further relevant information available.
· **Additional toxicological information:**
Information references exposures to battery contents, and not exposures to whole units. Exposures to whole units are unlikely to produce health hazards.
Harmful if swallowed.
Harmful if inhaled.
Product is suspected to cause birth defects.
The product can cause inheritable damage.

· **Carcinogenic categories**

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

· **Probable Routes of Exposure**
Ingestion.
Skin contact.
· **Repeated Dose Toxicity:** May cause damage to organs through prolonged or repeated exposure.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** The product contains materials that are harmful to the environment.
· **Persistence and degradability** Not easily biodegradable

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· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
This statement was deduced from the properties of the single components.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **UN-Number**
· **DOT, ADR, IMDG, IATA** UN3090
· **UN proper shipping name**
· **DOT** Lithium battery
· **ADR** 3090 LITHIUM METAL BATTERIES
· **IMDG, IATA** LITHIUM METAL BATTERIES
· **Transport hazard class(es)**
· **DOT, IMDG, IATA**

· **Class** 9 Miscellaneous dangerous substances and articles
· **Label** 9

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· **ADR**

· **Class**	9 (M4) Miscellaneous dangerous substances and articles
· **Label**	9
· **Packing group**	
· **DOT, IMDG, IATA**	II
· **ADR**	Not Regulated
· **Environmental hazards:**	
· **Marine pollutant:**	No
· **Special marking (IATA):**	Prohibited from Transport in Passenger Aircraft.

Cargo Aircraft Only.

· **Special precautions for user**	Warning: Miscellaneous dangerous substances and articles
· **Danger code (Kemler):**	-
· **EMS Number:**	F-A,S-I
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	Battery Specifications: Contains 0.0651 g equivalent lithium 210 mAh, 3.0 Volts (0.63 Watt-hours)
· **DOT**	
· **Remarks:**	Per 173.185(c): Packages containing 1 or 2 batteries are exempt from classification as dangerous goods. The outer package that contains lithium metal cells or batteries must be marked: "LITHIUM METAL BATTERIES-FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT." The package must be marked in accordance with 173.185(c)(3)(i) and accompanied with a document in accordance with 173.185(c)(3)(ii).
· **ADR**	
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **Remarks:**	Per Special provision 188: Packages containing 1 or 2 batteries are exempt from classification as dangerous goods. The package must be marked in accordance with Special Provision 188(f) and accompanied with a document in accordance with Special Provision 188(g).
· **IMDG**	
· **Limited quantities (LQ)**	0

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· **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

· **Remarks:** Per Special Provision 188: Packages containing 1 or 2 batteries are exempt from classification as dangerous goods. The package must be marked in accordance with Special Provision 188.6 and accompanied with a document in accordance with Special Provision 188.7.

· **IATA**

· **Remarks:** Per Packing Instruction 968, Section II: Packages containing 1 or 2 batteries are exempt from classification as dangerous goods. Use of the Lithium Batteries Label (Figure 7.4.H) is required. The product must be accompanied by a document stating the following:
- the package contains lithium ion cells or batteries;
- the package must be handled with care and that a flammability hazard exists if the package is damaged;
- special procedures must be followed in the event the package is damaged, to include inspection and re-packing if necessary; and
- a telephone number for additional information.

Per Packing Instruction 968, Section 1B: Packages containing 3 or more batteries must be assigned to Class 9 and are subject to all of the applicable provisions. UN specification packaging is not required. Use of the Lithium Batteries Label (Figure 7.4.H) is required. The product must be accompanied by a document as described in Section II.

· **UN "Model Regulation":** UN3090, Lithium battery, 9

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **SARA**

· **Section 355 (extremely hazardous substances):**
None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

1313-13-9	manganese dioxide
110-71-4	1,2-dimethoxyethane

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

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· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

1313-13-9	manganese dioxide	D
7791-03-9	lithium perchlorate	NL

· **IARC (International Agency for Research on Cancer)**

9003-07-0	Polypropylene	3
9002-84-0	Polytetrafluoroethylene	3

· **TLV (Threshold Limit Value established by ACGIH)**
None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**
None of the ingredients is listed.

· **State Right to Know Listings**
None of the ingredients is listed.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**
All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**
None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

108-32-7	propylene carbonate

· **Other regulations, limitations and prohibitive regulations**
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 01/22/2015 / -

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Flam. Liq. 2: Flammable liquids, Hazard Category 2
Water-react. 1: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 1

Water-react. 3: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 3

Ox. Sol. 1: Oxidising Solids, Hazard Category 1
Acute Tox. 3: Acute toxicity, Hazard Category 3
Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A
Repr. 1B: Reproductive toxicity, Hazard Category 1B
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

· **Sources**

SDS Prepared by:
ChemTel Inc.
1305 North Florida Avenue
Tampa, Florida USA 33602-2902
Toll Free North America 1-888-255-3924 Intl. +01 813-248-0573
Website: www.chemtelinc.com

PRODUCT SAFETY DATA SHEET

PRODUCT NAME: Eveready / Energizer Battery

Type No.:

Volts:

TRADE NAMES: ENERGIZER, ENERGIZER e², INDUSTRIAL ZMA, HERCULES, EVEREADY, WONDER

Approximate Weight:

CHEMICAL SYSTEM: Alkaline Manganese Dioxide-Zinc

Designed for Recharge: No

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 44145

Telephone Number for Information:
800-383-7323 (USA / CANADA)

Date Prepared: March 2015

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^3 TWA (total dust) 5 mg/m^3 TWA (respirable fraction)	2 mg/m^3 TWA (respirable fraction)	2-6
Manganese Dioxide (CAS# 1313-13-9)	5 mg/m^3 Ceiling (as Mn)	0.2 mg/m^3 TWA (as Mn)	30-45
Potassium Hydroxide (CAS# 1310-58-3)	None established	2 mg/m^3 Ceiling	4-8
Zinc (CAS# 7440-66-6)	15 mg/m^3 TWA PNOR* (total dust) 5 mg/m^3 TWA PNOR* (respirable fraction)	10 mg/m^3 TWA PNOC** (inhalable particulate) 3 mg/m^3 TWA PNOC** (respirable particulate)	12-25

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Non-Hazardous Components Steel (iron CAS# 65997-19-5 Water, Paper, Plastic and Other	 None established None established	 None established None established	 18-22 Balance

* PNOR: Particulates not otherwise regulated
**PNOC: 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.

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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^3)	2.0 – 3.0
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.

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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.

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