

**Safety Data Sheet**  
**BUTTON CELL BATTERY**

SDS Revision Date:

12/09/2014



**1. Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

<b>Product Identity</b>	BUTTON CELL BATTERY
<b>Alternate Names</b>	BUTTON CELL BATTERY, L1154 / LR44 / AG13 Zinc Manganese Dioxide Battery.

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

<b>Intended use</b>	See Technical Data Sheet.
<b>Application Method</b>	See Technical Data Sheet.

**1.3. Details of the supplier of the safety data sheet**

<b>Company Name</b>	Thermco Products, Inc. 10 Millpond Drive, Unit #10 Lafayette, NJ 07848
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**Emergency**

<b>Customer Service: Thermco Products, Inc.</b>	973.300.9100
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**2. Hazard identification of the product**

**2.1. Classification of the substance or mixture**

Acute Tox. 4;H302	Harmful if swallowed.
Acute Tox. 4;H332	Harmful if inhaled.
Aquatic Acute 1;H400	Very toxic to aquatic life.
Aquatic Chronic 2;H411	Toxic to aquatic life with long lasting effects.

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## 2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



### Warning

- H302 Harmful if swallowed.
- H332 Harmful if inhaled.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.

#### [Prevention]:

- P261 Avoid breathing dust / fume / gas / mist / vapors / spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P273 Avoid release to the environment.

#### [Response]:

- P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell.
- P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P330 Rinse mouth.
- P391 Collect spillage.

#### [Storage]:

No GHS storage statements

#### [Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

## 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Manganese dioxide CAS Number: 0001313-13-9	25 - 50	Acute Tox. 4;H332 Acute Tox. 4;H302	[1]

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Zinc powder (stabilized) CAS Number: 0007440-66-6	10 - 25	Aquatic Acute 1;H400 Aquatic Chronic 1;H410	[1]
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[1] Substance classified with a health or environmental hazard.

[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

\*The full texts of the phrases are shown in Section 16.

### 4. First aid measures

#### 4.1. Description of first aid measures

<b>General</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. KEEP OUT OF REACH OF CHILDREN.
<b>Inhalation</b>	Not anticipated. If battery is leaking, contents may be irritating to respiratory passages. Remove to fresh air. Contact physician if irritation persists.
<b>Eyes</b>	Not anticipated. If battery is leaking and material contacts eyes, flush with copious amounts of clear, tepid water for 30 minutes. Contact physician at once.
<b>Skin</b>	Not anticipated. If battery is leaking, irrigate exposed skin with copious amounts of clear, tepid water for at least 15 minutes. If irritation, injury or pain persists, consult a physician.
<b>Ingestion</b>	Not anticipated. Rinse the mouth and surrounding area with clear, tepid water for at least 15 minutes. Consult a physician immediately for treatment and to rule out involvement of the esophagus and other tissues.

#### 4.2. Most important symptoms and effects, both acute and delayed

<b>Overview</b>	These chemicals and metals are contained in a sealed can. For consumer use, adequate hazard warnings are included on both the package and on the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically, physically, or electrically abused. Inhalation: Respiratory (and eyes) irritation may occur if fumes are released due to heat or an abundance of leaking batteries. Ingestion: Not anticipated due to size of batteries; choking may occur with the small AAA and AAAA batteries. Irritation, including caustic burns/injury, may occur following exposure to a leaking battery. Skin: a. Contact: Irritation, including caustic burns/injury, may occur following exposure to a leaking battery. b. Absorption: Not anticipated. Eye Contact: Irritation, including caustic burns/injury, may occur following exposure to a leaking battery. See section 2 for further details.
<b>Inhalation</b>	Harmful if inhaled.
<b>Ingestion</b>	Harmful if swallowed.

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**5. Fire-fighting measures**

**5.1. Extinguishing media**

Use appropriate fire extinguisher for surround environment.

**5.2. Special hazards arising from the substance or mixture**

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

Avoid breathing dust / fume / gas / mist / vapors / spray.

**5.3. Advice for fire-fighters**

Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

**ERG Guide No.**            ----

**6. Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

Put on appropriate personal protective equipment (see section 8).

**6.2. Environmental precautions**

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

**6.3. Methods and material for containment and cleaning up**

Pick up to prevent slipping hazard, recycle or incinerate at an approved waste disposal site.

**7. Handling and storage**

**7.1. Precautions for safe handling**

See section 2 for further details. - [Prevention]:

**7.2. Conditions for safe storage, including any incompatibilities**

Handle containers carefully to prevent damage and spillage.

Incompatible materials: Strong Oxidizers

See section 2 for further details. - [Storage]:

**7.3. Specific end use(s)**

No data available.

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## 8. Exposure controls and personal protection

### 8.1. Control parameters

#### Exposure

CAS No.	Ingredient	Source	Value
0001313-13-9	Manganese dioxide	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007440-66-6	Zinc powder (stabilized)	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

#### Carcinogen Data

CAS No.	Ingredient	Source	Value
0001313-13-9	Manganese dioxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007440-66-6	Zinc powder (stabilized)	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

### 8.2. Exposure controls

#### Respiratory

For most situations, no respiratory protection should be needed; however, in dusty atmospheres, use an approved dust respirator.

#### Eyes

Protective safety glasses recommended when handling leaking batteries.

#### Skin

None under normal use conditions; Use neoprene rubber or latex gloves when handling leaking batteries.

#### Engineering Controls

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

#### Other Work Practices

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

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**9. Physical and chemical properties**

<b>Appearance</b>	White Solid
<b>Odor</b>	None
<b>Odor threshold</b>	Not Measured
<b>pH</b>	NA
<b>Melting point / freezing point</b>	NA
<b>Initial boiling point and boiling range</b>	NA
<b>Flash Point</b>	NA
<b>Evaporation rate (Ether = 1)</b>	NA
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Upper/lower flammability or explosive limits</b>	<b>Lower Explosive Limit: NA</b> <b>Upper Explosive Limit: NA</b>
<b>Vapor pressure (Pa)</b>	NA
<b>Vapor Density</b>	NA
<b>Specific Gravity</b>	NA
<b>Solubility in Water</b>	Insoluble
<b>Partition coefficient n-octanol/water (Log Kow)</b>	Not Measured
<b>Auto-ignition temperature</b>	NA
<b>Decomposition temperature</b>	NA
<b>Viscosity (cSt)</b>	NA
<b>VOC %</b>	NA

**9.2. Other information**

No other relevant information.

**10. Stability and reactivity**

**10.1. Reactivity**

Hazardous Polymerization will not occur.

**10.2. Chemical stability**

Stable under normal circumstances.

**10.3. Possibility of hazardous reactions**

No data available,

**10.4. Conditions to avoid**

Do not heat, crush, disassemble, short circuit or recharge.

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## 10.5. Incompatible materials

Contents incompatible with strong oxidizing agents.

## 10.6. 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.

## 11. Toxicological information

### Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Manganese dioxide - (1313-13-9)	No data available	No data available	No data available	No data available	No data available
Zinc powder (stabilized) - (7440-66-6)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	4	Harmful if swallowed.
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	4	Harmful if inhaled.
Skin corrosion/irritation	---	Not Applicable
Serious eye damage/irritation	---	Not Applicable
Respiratory sensitization	---	Not Applicable
Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

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### 12. Ecological information

#### 12.1. Toxicity

No additional information provided for this product. See Section 3 for chemical specific data.

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

#### Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Manganese dioxide - (1313-13-9)	Not Available	Not Available	Not Available
Zinc powder (stabilized) - (7440-66-6)	0.182, Oncorhynchus tshawytscha	0.068, Daphnia magna	0.106 (72 hr), Pseudokirchneriella subcapitata

#### 12.2. Persistence and degradability

There is no data available on the preparation itself.

#### 12.3. Bioaccumulative potential

Not Measured

#### 12.4. Mobility in soil

No data available.

#### 12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

#### 12.6. Other adverse effects

No data available.

### 13. Disposal considerations

#### 13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

### 14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	Not Applicable	Not Regulated	Not Regulated
14.2. UN proper shipping name	Not Regulated	Not Regulated	Not Regulated

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<b>14.3. Transport hazard class(es)</b>	<b>DOT Hazard Class:</b> Not Applicable <b>DOT Label:</b> ---	<b>IMDG:</b> Not Applicable <b>Sub Class:</b> Not Applicable	<b>Air Class:</b> Not Applicable
<b>14.4. Packing group</b>	Not Applicable	Not Applicable	Not Applicable
<b>14.5. Environmental hazards</b>			
<b>IMDG</b>	Marine Pollutant: Yes ( Zinc powder (stabilized) )		
<b>14.6. Special precautions for user</b>			
No further information			

### 15. Regulatory information

<b>Regulatory Overview</b>	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
<b>Toxic Substance Control Act ( TSCA )</b>	All components of this material are either listed or exempt from listing on the TSCA Inventory.
<b>WHMIS Classification</b>	Not Regulated
<b>US EPA Tier II Hazards</b>	<b>Fire:</b> No <b>Sudden Release of Pressure:</b> No <b>Reactive:</b> No <b>Immediate (Acute):</b> Yes <b>Delayed (Chronic):</b> No
<b>EPCRA 311/312 Chemicals and RQs (lbs):</b>	
Zinc powder (stabilized) ( 1,000.00)	
<b>EPCRA 302 Extremely Hazardous :</b> (No Product Ingredients Listed)	
<b>EPCRA 313 Toxic Chemicals:</b>	
Manganese dioxide	
Zinc powder (stabilized)	
<b>Proposition 65 - Carcinogens (&gt;0.0%):</b> (No Product Ingredients Listed)	
<b>Proposition 65 - Developmental Toxins (&gt;0.0%):</b> (No Product Ingredients Listed)	
<b>Proposition 65 - Female Repro Toxins (&gt;0.0%):</b> (No Product Ingredients Listed)	
<b>Proposition 65 - Male Repro Toxins (&gt;0.0%):</b> (No Product Ingredients Listed)	
<b>N.J. RTK Substances (&gt;1%):</b>	
Zinc powder (stabilized)	
<b>Penn RTK Substances (&gt;1%):</b>	
Zinc powder (stabilized)	

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**16. Other information**

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H302 Harmful if swallowed.

H332 Harmful if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

**This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.**

Disclaimer: This information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

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