

# SAFETY DATA SHEET

HCS-2012 APPENDIX D TO §1910.1200

Version 1  
Product Name Carbon Zinc Cathode Mix-Battery Kit

Issue Date 12-Sep-2016  
Revision date 12-Sep-2016

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Product identifier

Product Name Carbon Zinc Cathode Mix-Battery Kit

### Other means of identification

Nominal Voltage 1.5V  
Rated Capacity 2024mAh  
Weight 0.027kg

### Recommended use of the chemical and restrictions on use

Recommended Use Power supply  
Uses advised against No information available.

### Details of the supplier of the safety data sheet

Supplier Energizer Battery Manufacturing, Inc  
Address 1359 Columbia Rd. Westlake, Ohio  
Postal Code 44145  
Phone 800-383-7323  
FAX -  
E-mail -  
  
Importer August Home, INC  
Address 657 Bryant Street, San Francisco, CA 94107, USA  
Postal Code 94107  
Phone +14087996294  
FAX -  
E-mail pushpinder@august.com

### Emergency telephone number

800-424-9300

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

### Label elements

Symbols/Pictograms None  
Signal word None  
Hazard Statements Not classified  
Precautionary Statements  
Prevention None.  
Response None.  
Storage None.  
Disposal None.

### Hazards not otherwise classified (HNOC)

No information available.

### Unknown acute toxicity

No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature	Articles		
Chemical Name		CAS No	Weight-%
Manganese dioxide		1313-13-9	55-65
Acetylene black		1333-86-4	10-14
Zinc chloride		7646-85-7	8-12
Zinc oxide		1314-13-2	7-9

### 4. FIRST AID MEASURES

#### Description of first aid measures

General advice	In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Inhalation	Not an expected route of exposure. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin Contact	Wash skin with soap and water.
Eye contact	Not an expected route of exposure. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Not an expected route of exposure. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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

No information available.

#### Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	No information available.

#### Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors, such as carbon oxides (COx), metal oxides.

#### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Cool containers with flooding quantities of water until well after fire is out. Evacuate personnel to safe areas.

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Remove all sources of ignition. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Do not touch or walk through spilled material. Ensure adequate ventilation, especially in confined areas. Use personal protection recommended in Section 8. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

#### Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so.  
Pick up and transfer to properly labeled containers.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes or clothing. Wash thoroughly after handling. Use personal protection recommended in Section 8. Take precautionary measures against static discharges. Do not eat, drink or smoke when using this product.

### Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Store in accordance with local regulations.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH	Denmark	European Union
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.02 mg/m <sup>3</sup> Mn TWA: 0.1 mg/m <sup>3</sup> Mn	(vacated) Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup> Mn	IDLH: 500 mg/m <sup>3</sup> Mn TWA: 1 mg/m <sup>3</sup> Mn STEL: 3 mg/m <sup>3</sup> Mn	TWA: 0.2 mg/m <sup>3</sup>	-
Acetylene black(CAS #: 1333-86-4)	TWA: 3 mg/m <sup>3</sup> inhalable fraction	-	IDLH: 1750 mg/m <sup>3</sup> TWA: 3.5 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> Carbon black in presence of Polycyclic aromatic hydrocarbons PAH	TWA: 3.5 mg/m <sup>3</sup>	-
Zinc chloride (CAS #: 7646-85-7)	STEL: 2 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> fume	TWA: 1 mg/m <sup>3</sup> fume (vacated) TWA: 1 mg/m <sup>3</sup> fume (vacated) STEL: 2 mg/m <sup>3</sup> fume	IDLH: 50 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> fume STEL: 2 mg/m <sup>3</sup> fume	TWA: 0.5 mg/m <sup>3</sup>	-
Zinc oxide (CAS #: 1314-13-2)	STEL: 10 mg/m <sup>3</sup> respirable fraction TWA: 2 mg/m <sup>3</sup> respirable fraction	TWA: 5 mg/m <sup>3</sup> fume TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 5 mg/m <sup>3</sup> fume (vacated) TWA: 10 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) STEL: 10 mg/m <sup>3</sup> fume	IDLH: 500 mg/m <sup>3</sup> Ceiling: 15 mg/m <sup>3</sup> dust TWA: 5 mg/m <sup>3</sup> dust and fume STEL: 10 mg/m <sup>3</sup> fume	TWA: 4 mg/m <sup>3</sup>	-

Chemical Name	Latvia	France	Finland	Germany	Italy
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.3 mg/m <sup>3</sup>	-	TWA: 0.2 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup> TWA: 0.02 mg/m <sup>3</sup> Ceiling / Peak: 1.6 mg/m <sup>3</sup> Ceiling / Peak: 0.16 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	-
Acetylene black(CAS #: 1333-86-4)		TWA: 3.5 mg/m <sup>3</sup>	TWA: 3.5 mg/m <sup>3</sup> STEL: 7 mg/m <sup>3</sup>	Skin	-
Zinc chloride (CAS #: 7646-85-7)		TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 0.1 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> Ceiling / Peak: 2 mg/m <sup>3</sup> Ceiling / Peak: 0.4 mg/m <sup>3</sup> Ceiling / Peak: 4 mg/m <sup>3</sup>	-

Zinc oxide (CAS #: 1314-13-2)	TWA: 0.5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> TWA: 10 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> Ceiling / Peak: 2 mg/m <sup>3</sup> Ceiling / Peak: 0.4 mg/m <sup>3</sup> Ceiling / Peak: 4 mg/m <sup>3</sup>	-
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Chemical Name	Poland	Portugal	Spain	Switzerland	Netherlands
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.3 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.2 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	-
Zinc chloride (CAS #: 7646-85-7)	STEL: 2 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	STEL: 2 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	STEL: 2 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	-
Zinc oxide (CAS #: 1314-13-2)	STEL: 10 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup>	STEL: 10 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	STEL: 10 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup>	STEL: 3 mg/m <sup>3</sup> TWA: 3 mg/m <sup>3</sup>	-

Chemical Name	Norway	United Kingdom	Australia	Austria	Belgium
Manganese dioxide (CAS #: 1313-13-9)	TWA: 1 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> STEL: 1 ppm STEL: 0.1 mg/m <sup>3</sup>	TWA: 0.5 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	STEL 2 mg/m <sup>3</sup> TWA: 0.5 mg/m <sup>3</sup>	-
Acetylene black(CAS #: 1333-86-4)	TWA: 3.5 mg/m <sup>3</sup> STEL: 3.5 mg/m <sup>3</sup>	-	3 mg/m <sup>3</sup>	-	-
Zinc chloride (CAS #: 7646-85-7)	TWA: 1 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>	STEL: 2 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup> 2 mg/m <sup>3</sup> STEL	-	-
Zinc oxide (CAS #: 1314-13-2)	TWA: 5 mg/m <sup>3</sup> STEL: 10 mg/m <sup>3</sup>	-	10 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup> STEL	TWA: 5 mg/m <sup>3</sup>	-

**Appropriate engineering controls**

Showers. Eyewash stations. Use with local exhaust ventilation.

**Individual protection measures, such as personal protective equipment**

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hand Protection Wear protective gloves.

Eye/face protection No special technical protective measures are necessary. Avoid contact with eyes.

Skin and body protection No special technical protective measures are necessary.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

Appearance	Solid
Color	No information available
Odor	No information available
Odor Threshold	Not determined
pH	Not determined
Melting point/freezing point	Not determined
Boiling point / boiling range	Not determined
Flash point	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Flammability Limit in Air	Not determined
Vapor Pressure	Not determined
Vapor density	Not determined
Density	Not determined
Partition coefficient (LogPow)	Not determined
Autoignition temperature	Not determined
Decomposition temperature	Not determined

<b>Kinematic viscosity</b>	Not determined
<b>Dynamic viscosity</b>	Not determined
<b>Explosive properties</b>	Not an explosive
<b>Oxidizing properties</b>	Not determined

**Other information**

No information available

**10. STABILITY AND REACTIVITY****Reactivity**

No known effects under normal use conditions.

**Chemical stability**

Stable under normal conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Strong heating. Incompatible materials.

**Incompatible materials**

Strong acids. Strong bases. Strong oxidizing agents.

**Hazardous Decomposition Products**

None under normal use conditions

**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Inhalation	No known effect based on information supplied.
Eye contact	No known effect based on information supplied.
Skin Contact	No known effect based on information supplied.
Ingestion	No known effect based on information supplied.

**Information on toxicological effects****Acute toxicity**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Manganese dioxide (CAS #: 1313-13-9)	>3480 mg/kg ( Rat ) male	-	-
Acetylene black(CAS #: 1333-86-4)	> 8000 mg/kg bw(rat)	> 4.6 mg/m <sup>3</sup> /4h (rat)	-
Zinc chloride (CAS #: 7646-85-7)	350 mg/kg ( Rat )	-	-
Zinc oxide (CAS #: 1314-13-2)	> 5000 mg/kg ( Rat )	-	-

**Skin corrosion/irritation**

Non-irritating to the skin.

**Serious eye damage/eye irritation**

No eye irritation.

**Sensitization**

No information available.

**Germ cell mutagenicity**

No information available.

**Carcinogenicity**

Chemical Name	ACGIH	IARC	NTP	OSHA
Acetylene black(CAS #: 1333-86-4)	A3	Group 2B	-	-

**Reproductive toxicity**

No information available.

**STOT - single exposure**

No information available.

**STOT - repeated exposure**

No information available.

**Aspiration hazard**

No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

Chemical Name	Algae/aquatic plants EC50	Fish LC50	Crustacea EC50
Manganese dioxide (CAS #: 1313-13-9)	> 100 other: v/v saturated solution 72h Desmodesmus subspicatus	> 100 other: % v/v saturated solution 96h Oncorhynchus mykiss	> 100 other: % v/v saturated solution 48h Daphnia magna
Acetylene black(CAS #: 1333-86-4)	> 10000 mg/L/72 h(Scenedesmus subspicatus)	> 1000 mg/l/96h (Brachydanio rerio)	> 5600 mg/l/24h (Daphnia magna)
Zinc chloride (CAS #: 7646-85-7)	0,01 mg/l/72h	0,027 mg/l/96h	0,05 mg/l/48h

**Persistence and degradability**

No information available.

**Bioaccumulative potential**

Chemical Name	Partition coefficient (LogPow)
Manganese dioxide (CAS #: 1313-13-9)	<0

Chemical Name	Bioconcentration factor (BCF)
Zinc chloride (CAS #: 7646-85-7)	16000

**Mobility in soil**

No information available.

**Other adverse effects**

No information available.

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.  
 Contaminated packaging Dispose of in accordance with federal, state and local regulations.

Chemical Name	California Hazardous Waste Status
Zinc chloride 7646-85-7	Toxic Corrosive
Zinc oxide 1314-13-2	Toxic

**14. TRANSPORT INFORMATION**

**DOT**

<b>UN/ID No.</b>	Not regulated
<b>UN Proper shipping name</b>	Not regulated
<b>Hazard Class</b>	Not regulated
<b>Packing Group</b>	Not regulated
<b>Special precautions</b>	No information available
<b>Marine pollutant</b>	Not applicable

**15. REGULATORY INFORMATION**

**International Inventories**

Component	AICS	DSL/NDSL	EINECS/ELI NCS	ENCS	IECSC	KECL	PICCS	TSCA
Manganese dioxide 1313-13-9 ( 55-65 )	X	X	X	X	X	X	X	X
Acetylene black 1333-86-4 ( 10-14 )	X	X	X	X	X	X	X	X
Zinc chloride 7646-85-7 ( 8-12 )	X	X	X	X	X	X	X	X
Zinc oxide 1314-13-2 ( 7-9 )	X	X	X	X	X	X	X	X

"-" Not Listed  
 "X" Listed

**US Federal Regulations**

**SARA 313**

Not applicable

Chemical Name	SARA 313 - Threshold Values %
Manganese dioxide - 1313-13-9	1.0
Zinc chloride - 7646-85-7	1.0
Zinc oxide - 1314-13-2	1.0

**SARA 311/312 Hazard Categories**

Not applicable

**CWA (Clean Water Act)**

Not applicable

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Zinc chloride 7646-85-7	1000 lb	X	-	X
Zinc oxide 1314-13-2	-	X	-	-

**CERCLA**

Not applicable

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Zinc chloride 7646-85-7	1000 lb	-	RQ 1000 lb final RQ RQ 454 kg final RQ

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

Chemical Name	California Proposition 65
Acetylene black- 1333-86-4	Carcinogen

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated under applicable state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Manganese dioxide 1313-13-9	X	-	X
Acetylene black 1333-86-4	X	X	-
Zinc chloride 7646-85-7	X	X	X
Zinc oxide 1314-13-2	X	X	X

## 16. OTHER INFORMATION

### Revision Note

Issue Date	12-Sep-2016
Revision date	12-Sep-2016
Revision Note	Not applicable

### Key or legend to abbreviations and acronyms used in the safety data sheet

**TWA** - TWA (time-weighted average)

**STEL** - STEL (Short Term Exposure Limit)

**Ceiling** - Maximum limit value

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

### Disclaimer

The information provided in 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

----- End of Safety Data Sheet -----