

MSDS

Safety Data Sheet

According to HCS-2012 APPENDIX D TO §1910.1200

Version: 1.0/EN

Product name: Zinc Carbon Battery

Revision date: 08/06/2014

Printing date: 08/06/2014

1. Identification

(a) Product identifier

Product name: Zinc Carbon Battery

Product model: D, C, AA, AAA, 9V

(b) Other means of identification

Product description: 1.5V (9V); 160mAh~3000mAh

(c) Recommended use of the chemical and restrictions on use

Recommended use: Lighting, remote control, toy, radio

Restriction on use: No information available.

(d) Details of the supplier of the product

Company name: Suzhou South Large Battery Co., Ltd.

Address: No. 16, Loushang Street, East Jinling Road, Weiting Town, Suzhou Industrial Park, Jiangsu

Postcode: 215121

E-mail: Yiyen.duan@south-battery.com

Telephone: +86 512-65071576

Fax: +86 512-65071721

(e) Emergency phone number

+86 512-65071576

2. Hazard(s) identification

(a) Classification of the chemical

The battery is considered as an article, and this product is not classified as hazardous.

(b) Label elements

Pictogram(s): No pictogram is used.

Signal word: No signal word is used.

Hazard statements: Not classified.

Precautionary statements: Not classified.

(c) Description of any hazards not otherwise classified

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is acute exposure when a battery vents. Leaking material exposure to skin, eyes may cause irritation. Inhalation of fumes may cause respiratory irritation.

(d) Ingredient with unknown acute toxicity

No information available.

3. Composition/information on ingredients

(a) Mixtures information: ingredients contained within the battery

Chemical name	CAS No.	Concentration (%)
Zinc	7440-66-6	25~31

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Manganese Dioxide	1313-13-9	25~35
Carbon	7440-44-0	9~12
Zinc Chloride	7646-85-7	6
Ammonium chloride	12125-02-9	1.3
Copper	7440-50-8	1
Iron	7439-89-6	1.5
Water	7732-18-5	13~17
Polypropylene	9003-07-0	2~3

4. First-aid measures

(a) Description of first aid measures

Caution! No specific health hazards for normal use. Leaking material exposure to skin, eyes may cause irritation. Inhalation of fumes may cause respiratory irritation.

Inhalation: Remove from exposure and move to fresh air immediately. Use oxygen if available. Get medical aid.

Skin contact: Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

Eye contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Ingestion: Do not induce vomiting. Call a physician immediately.

(b) Most important symptoms/effects, acute and delayed

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is acute exposure when a battery vents. Leaking material exposure to skin, eyes may cause irritation. Inhalation of fumes may cause respiratory irritation. See Section 11 for more information.

(c) Immediate medical attention and special treatment

No information available.

5. Fire-fighting measures

(a) Extinguishing media

Suitable extinguishing media: CO₂, dry chemical.

Unsuitable extinguishing media: No information available.

(b) Special hazards arising from the chemical

Cell may vent when subjected to excessive heat-exposing battery contents.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, and other metal oxide fumes.

(c) Special protective equipment and precautions for fire-fighters

As in any fire, wear a self-contained breathing apparatus and full protective gear.

6. Accidental release measures

(a) Personal precautions, protective equipment and emergency procedures

No action shall be taken involving any personal risk or without suitable training. Review Section 5 and Section 7

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sections before proceeding with clean-up. Use proper personal protective equipment as indicated in Section 8. Appropriate ventilation. If electrolyte leaks or spills, do not touch or walk through electrolyte.

(b) Methods and materials for containment and cleaning up

If the battery is accidentally broken and leaks out, wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled material with absorbent.

7. Handling and storage

(a) Precautions for safe handling

The batteries should not be opened, destroyed or incinerated, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids. Do not short or install with incorrect polarity.

(b) Conditions for safe storage, including any incompatibilities

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

8. Exposure controls/personal protection

(a) Control parameters

CAS# 7440-44-0	OSHA PEL : TWA 15 mg/m3 (total) TWA 5 mg/m3 (resp)
CAS# 7646-85-7	OSHA PEL : TWA 1 mg/m3 NIOSH REL: TWA 1 mg/m3 ST 2 mg/m3 IDLH: 50 mg/m3
CAS# 12125-02-9	NIOSH REL: TWA 10 mg/m3 ST 20 mg/m3 OSHA PEL : none
CAS# 7440-50-8	NIOSH REL*: TWA 1 mg/m3 [*The REL also applies to other copper compounds (as Cu) except Copper fume.] OSHA PEL*: TWA 1 mg/m3 [*The PEL also applies to other copper compounds (as Cu) except copper fume.]
CAS# 7439-89-6	NIOSH REL: TWA 1 mg/m3 OSHA PEL : none

(b) Appropriate engineering controls

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Do not install these batteries in sealed, unventilated areas. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

(c) Personal protective equipment

Respiratory protection:	Respiratory Protection is not necessary under conditions of normal use.
Hand protection:	Not necessary under conditions of normal use.
Eye/face protection:	Not necessary under conditions of normal use.
Skin/body protection:	Not necessary under conditions of normal use.

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9. Physical and chemical properties

(a) Appearance	Black columned battery
(b) Odor	Odourless
(c) Odor threshold	Not available.
(d) pH	Not available.
(e) Melting point/freezing point	Not available.
(f) Initial boiling point and boiling range	Not available.
(g) Flash point	Not available.
(h) Evaporation rate	Not available.
(i) Flammability	Not available.
(j) Upper/lower flammability or explosive limits	Not available.
(k) Vapor pressure	Not available.
(l) Vapor density	Not available.
(m) Relative density	Not available.
(n) Solubility(ies)	Insoluble in water.
(o) Partition coefficient: n-octanol/water	Not available.
(p) Auto-ignition temperature	Not available.
(q) Decomposition temperature	Not available.
(r) Viscosity	Not available.

10. Stability and reactivity

(a) Reactivity

Stable under recommended storage and handling conditions.

(b) Chemical stability

Stable under normal condition.

(c) Possibility of hazardous reactions

When exposed to fire or extreme heat, batteries may emit toxic fumes.

(d) Conditions to avoid

Heating, fire, mechanical abuse and electrical abuse

(e) Incompatible materials

Conductive materials, water, seawater, strong oxidizers and acids.

(f) Hazardous decomposition products

Carbon monoxide, carbon dioxide, and other metal oxide fumes.

11. Toxicological information

(a) Information on the likely routes of exposure

- | | |
|-------------|--|
| Inhalation: | No effect under routine handling and use for sealed battery. Exposure to internal contents may cause irritation. |
| Ingestion: | No effect under routine handling and use for sealed battery. Exposure to internal contents may |

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cause irritation.

Skin contact: No effect under routine handling and use for sealed battery. Exposure to internal contents may cause irritation.

Eye contact: No effect under routine handling and use for sealed battery. Exposure to internal contents may cause irritation.

(b) Information on toxicological characteristics

Acute toxicity: No data available.

Skin corrosion/irritation: No data available.

Serious eye damage/irritation: No data available.

Respiratory sensitization: No data available.

skin sensitization: No data available.

Carcinogenicity: No data available.

Germ Cell Mutagenicity: No data available.

Reproductive Toxicity: No data available.

STOT-Single Exposure: No data available.

STOT-Repeated Exposure: No data available.

Aspiration Hazard: No data available.

12. Ecological information

(a) Ecotoxicity

No data available.

(b) Persistence and Degradability

No data available.

(c) Bioaccumulative potential

No data available.

(d) Mobility in soil

No data available.

(e) Other adverse effects

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow

13. Disposal considerations

(a) Safe handling and methods of disposal

It is recommended to discharge the battery to the end, handing in the abandoned battery to related department to dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

14. Transport information

The product is not regulated as a hazardous material for transportation. (UN TDG Rev.17; IMDG CODE 35-10 edition;

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IATA DGR 53rd edition)

(a) UN number Not applicable.

(b) UN Proper shipping name Not applicable.

(c) Transport hazard class(es) Not applicable.

(d) Packing group (if applicable) Not applicable.

(e) Marine pollutant (Yes/No) No

(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code) Not applicable.

(g) Special precautions Batteries must be separated from each other to prevent short circuits and to prevent movement that could lead to short circuits. Products must also be packed in strong packaging that can withstand the rigors normal to transportation.

15. Regulatory information

(a) Safety, health and environmental regulations specific for the product in question

CAS No.	USA TSCA	Canada DSL	China IECSC
7440-66-6	Listed	Listed	Listed
1313-13-9	Listed	Listed	Listed
7440-44-0	Listed	Listed	Listed
7646-85-7	Listed	Listed	Listed
12125-02-9	Listed	Listed	Listed
7440-50-8	Listed	Listed	Listed
7439-89-6	Listed	Listed	Listed
7732-18-5	Listed	Listed	Listed
9003-07-0	Listed	Listed	Listed

Remark: The above-mentioned search results are based on the Non-Confidential Inventory.

16. Other information, including date of preparation or last revision

(a) Preparation and revision information

Date of previous revision: Not applicable.

Date of this revision: 08/06/2013

Revision summary: The first New SDS

(b) Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
OSHA:	The United States Occupational Safety and Health Administration.
TWA:	time-weighted average
STEL:	Short term exposure limit
DOT:	US Department Of Transportation)
IMDG:	International Maritime Dangerous Goods
IATA:	International Air Transport Association
TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
IECSC:	Inventory of existing chemical substances in China.

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(c) Disclaimer

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the SDS -----