No.SET2020-00402

Safety Data Sheet (SDS) Report

Client unit: SHENZHEN PKCELL BATTERY CO.,LTD

Name of sample: Ni-Zn Battery(Ni-Zn AAA900mWh 1.6V Ni-Zn AA2500mWh 1.6V)

Address: 4th Building,Meitai Technology Park,Guanguang Road,Longhua,Shenzhen,China

Tested by: Aaron Checked By: Liu Jian Approved By: Billow

Date: Jan.08.2020 Date: Jan.08.2020 Date: Jan.08.2020

Query No. :DKX6QT4a

CCIC Southern Testing CO., Ltd.
Add: Electronic Testing Building, No. 43 Shahe Road, Xili Jiedao, Nanshan District, 518055 Shenzhen, Guangdong, China
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1 Identification of substance

Product details

Product name: Ni-Zn Battery

Model No.: Ni-Zn AAA900mWh 1.6V / Ni-Zn AAA900mWh 1.6V

Manufacturer: SHENZHEN PKCELL BATTERY CO.,LTD

Address: 4th Building,Meitai Technology Park,Guanguang Road,Longhua,Shenzhen,China

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SDS Code: SET2020-00402

2 Hazards identification

Emergency Overview: May explode in a fire, which could release hydrogen fluoride gas.
Use extinguishing media suitable for materials burning in fire.

Primary routes of entry:

Skin contact: NO
Skin absorption: NO
Eye contact : NO
Inhalation: NO
Ingestion: NO

Symptoms of exposure:

Skin contact: No effect under routine handling and use.
Skin absorption: No effect under routine handling and use.
Eye contact: No effect under routine handling and use.
Inhalation: No effect under routine handling and use.
Reported as carcinogen: Not applicable.

3 Composition/Data on components

Chemical characterization:
Description : (CAS#)

Chemical Name	In % By Weight	CAS No.	EC No.	Molecular Formula
Nickel hydroxide	33.5	12054-48-7	234-348-1	$Ni(OH)_2$
Nickel	5.5	130469-99-7	NA	Zn
Zinc oxide	29.0	1314-13-2	215-222-5	ZnO
Zinc	7.5	7440-66-6	231-175-3	Zn
Copper	9.5	7440-50-8	231-159-6	Cu
Iron	11.0	7439-89-6	231-096-4	Fe
Potassium hydroxide(Liquid)	4.0	1310-58-3	215-181-3	KOH

Abbreviation: CAS No. is Chemical Abstract Service Registry Number.
EC No. is European Inventory of Existing Commercial chemical Substances Number.
NA = Not apply.

4 First aid measures

Inhalation
Not a health hazard.

Eye contact
Not a health hazard.

Skin contact
Not a health hazard.

Ingestion
If swallowed, obtain medical attention immediately.

IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL DUE TO DAMAGED OUTER CASING, THE FOLLOWING ACTIONS ARE RECOMMENDED;
Inhalation
Leave area immediately and seek medical attention.

Eye contact
Rinse eyes with water for 15min.

Skin contact

Wash area thoroughly whit soap and water and seek medical attention.

Ingestion
Drink milk/water and induce vomiting; seek medical attention.

5 Fire fighting measures

General Hazard:
Cell is not flammable. Combustion products include, but are not limited to Hydrogen fluoride, carbon monoxide and carbon dioxide.

Extinguishing Media:
Use extinguishing media suitable for the materials that are burning.
Special Fire fighting Instructions:
If possible, remove cell(s) from fire fighting area, If heated above 160℃, cell(s) may explode/vent.

Fire fighting Equipment:
Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6 Accidental release measures

On land:
Place material into suitable containers and call local fire/police department.
In water:
If possible, remove from water and call local fire/police department.

7 Handling and storage

Handling: No special protective clothing required for handing individual cells.
Storage: Store in a cool, dry place.

8 Exposure controls and personal protection

Engineering controls: Keep away from heat and open flame. Store in a cool dry place.
Personal Protection:
Respirator: Not required during normal operations. SCBA required in the event of a fire.
Eye/face protection: Not required safety practices of employer.
Gloves: Not required for handling of cells.
Foot protection: Steel toed shoes recommended for large container handling.

9 Physical and chemical properties:

General Information
State: Solid
Chemical properties:
Boiling Point: Not Applicable
Vapor Pressure: Not Applicable
Vapor Density: Not Applicable
Solubility In Water: Insoluble
Specific Gravity (H_2O = 1): Not Applicable
pH: Not Applicable
Density: Not Applicable

10 Stability and reactivity

Reactivity: None.

Incompatibilities: None during normal operation. Avoid exposure to heat, open flame, and corrosives.

Hazardous Decomposition Products: None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

Conditions to Avoid: Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

11 Toxicological information

This product does not elicit toxicological properties during routine handling and use
Sensitization: No
Teratogenicity: No
Reproductive toxicity: No
Acute toxicity: No

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

12 Ecological information

Some materials within the cell are bio-accumulative. Under normal conditions, These materials are contained and pose no risk to persons or the surrounding environment.

13 Disposal considerations

California regulated debris
RCRA Waste Code: Non-regulated
Dispose of according to all federal, state, and local regulations.

14 Transport information

Number of dangerous goods: 8
UN Number: 3028

In general, all batteries in all forms of transportation (by sea, land or air) 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.
Ni-Zn Battery (sometimes referred to as "dry cell" batteries) are not listed as dangerous goods under the IATA Dangers Good 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. Special Provision A123 in the IATA Dangers Good Regulations and ICAO Technical Instructions and Special Provision 130 in 49 CFR 172.102 of the U.S. hazardous materials regulations require alkaline batteries are packed in such a way to prevent short circuits or generating a dangerous quantity of heat. In addition, the IATA Dangers Good Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision A123 be provided on the air waybill, when an air waybill is issued.
The only requirements for shipping these cells by ICAO and IATA is Special Provision A123 which states: "An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transportation.
IMDG Special Provision 304: "This entry may only be used for the transport of non-activated batteries which contain dry potassium hydroxide and which are intended to be activated prior to use by the addition of an appropriate amount of water to the individual cells."

15 Regulations

OSHA Hazard communication standard (29 CFR 1910.1200)
Hazardous ___ Non-hazardous √___
ISO 11014-2009 Safety data sheet for chemical products - Content and order of sections.
The International Air Transport Association (IATA) Dangerous Goods Regulations, 61st, 2020.
International Maritime Dangerous Goods (IMDG CODE) (Amdt.39-18)

16 Other information:

The above information are correct, but does not contain all of the information and only used as a guide. The information in this document is based on our current knowledge, it apply to this product as for the correct safety tips. The information does not guarantee the properties of this product. Our company is not responsible for any damages caused by the products.

Note:
-The model for test is Ni-Zn AAA900mWh 1.6V.
-Sample photo:



****** END OF REPORT ******