

GP Batteries

Material Safety Data Sheet

Model No.: GP Zinc Air Cells -
ZA10/ZA13/ZA312/ZA675

Document Number: MSDS-PPZ-005

Revision:5

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IDENTITY (As Used on Label and List)
Zinc Air Alkaline

Note : Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

Section 1- Identification

Product Name	Zinc Air Battery Mercury Free
Manufacturer's name, address, telephone number	GP Battery Marketing (HK) Limited / ELT Address: 7/F, Building 16W, 16 Science Park West Avenue, Hong Kong Science Park, New Territories, Hong Kong Tel: +852-24843111
Emergency phone number	Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-527-3887
Date of prepared and revision	Jan 1, 2024

Section 2 – Hazards Identification

GHS Classification:	N/A
Canadian WHMIS requirement	N/A
29 CFR 1910.1200 OSHA requirement	N/A

Section 3 – Composition/Information On Ingredients

INGREDIENT NAME	CAS #	%	TLV*/**TWA
Zinc	7440-66-6	30-40	5.0 mg/m3 (ZnO as Fume)
Steel	7439-89-6	30-40	---
SS – Nickel plating	7440-02-0	3-7	1.0 mg/m3 (Elemental, TWA)
SS – Copper plating	7440-50-8	1-5	1 mg/m3 (TWA)
Carbon Black	1333-86-4	1-3	3.5 mg/m3 Respirable (TWA)
Potassium Hydroxide solution	1310-58-3	1-3	Solution Not Listed
Lead	7439-92-1	0.015-0.02	0.05 mg/m3 (TWA)
Water, paper, plastic, surfactant	7732-18-5	2	Not Listed

*Source: OSHA 29 CFR 1910.1000 Table Z-1 11-01-2012

Section 4 – First Aid Measures

- a) Description of necessary measure, subdivided according to different routes of exposure, i.e., inhalation. Skin and eye contact, and ingestion
- | | |
|--------------|--|
| Inhalation | Fumes can cause respiratory irritation. Remove to fresh air and consult a physician. |
| Skin Contact | Immediately flush skin with soap and plenty of water. If itch or irritation by chemical burn persists, consult a physician. |
| Eye Contact | Immediately flush eye with flowing lukewarm water for a minimum of 15 minutes. Consult a physician immediately. |
| Ingestion | If swallowing a battery, consult a physician immediately.
If content come into mouth, immediately rinse by plenty of water and consult a physician. |
- b) Most important symptoms/ effects, acute and delayed:
N/A
- c) Indication of immediate medical attention and special treatment needed, if necessary:
Wash with clean water immediately

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Section 5 – Fire-Fighting Measures

- a) Suitable (and unsuitable) Extinguishing Media
Use water, foam, or dry powder as appropriate
- b) Special Fire Fighting Procedures
Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit. Cool exterior of batteries if exposed to fire to prevent rupture.
- c) Special Fire and Explosion Hazards
Battery cells may rupture when exposed to excessive heat; this could result in the release of corrosive materials

Section 6 – Accidental Release Measures

To contain and clean up leaks or spills: In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container

Reporting procedure: Report all spills in accordance with Federal, State and Local reporting requirements.

Section 7 – Handling and Storage

a) Handling

Do not recharge.

Do not puncture or abuse.

Never swallow.

Never touch liquid leaking from a battery.

Never short-circuit the battery.

Never expose to naked flames – exposing to naked flames can cause the battery to explode.

Never heat.

b) Storage

Store batteries in a dry place. Storing unpackaged cells together could result in cell shorting and heat build-up.

Never store batteries in hot and high humid place.

Never let batteries contact with water.

Section 8– Exposure Control / Person Protection

Respiratory protection (Special type): N/A

Ventilation: Local Exhaust: N/A

Mechanical (General): N/A

Special: N/A

Other: N/A

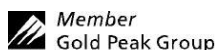
Protective Gloves: N/A

Eye Protection: N/A

Other Protective Clothing: N/A

Section 9 - Physical / Chemical Properties

Boiling Point @760 mm Hg (°C):	N/A	Percent Volatile by Volume (%):	N/A
Vapor Pressure (mm Hg @ 25°C):	N/A	Evaporation Rate (Butyl Acetate = 1)''	N/A
Vapor Density (AIR = 1):	N/A	Physical State:	N/A
Density (grams/cc):	N/A	Solubility in Water (% by Weight):	N/A
pH:	N/A		



Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.

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Appearance and Odor:

Geometric solid object with several holes in the positive (+) side

Section 10 – Stability and Reactivity

Stable or Unstable: Stable

Incompatibility (Materials to avoid) N/A

Hazardous Decomposition products: N/A

Decomposition Temperature (0°F) N/A

Hazardous Polymerization: Will not occur

Conditions to avoid: Avoid electrical shorting, puncturing or deforming

Section 11 – Toxicological Information

INGREDIENT NAME	CAS #	%	TLV*/**TWA
Zinc	7440-66-6	30-40	5.0 mg/m ₃ (ZnO as Fume)
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Section 12 – Ecological Information

Zinc air batteries can release small amounts of zinc oxide to the environment if abused and disposed of improperly. Small amounts of zinc could enter the storm water and affect gill breathing animals if a large quantity of damaged batteries were released. Small button cells can be swallowed. At higher risk are children, elderly or pets. Do not place in fire. Dispose of properly when discharged. Use a recycling outlet if available. Those collecting batteries should follow state and federal regulations.

Partially discharged damaged batteries can overheat and cause fires in the presence of other combustible materials.

Section 13 – Disposal Considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging.

The battery may be regulated by national or local regulation. Please follow the instructions of proper regulation.

If you choose to retain discharged batteries and recycle be sure to store them out of the reach of children and pets.

Do not store with adult medications of similar size of shape.

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Section 14 – Transportation Information

TRANSPORTATION-SHIPPING:

These are considered “Dry cell” batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) Dangerous Goods Regulations 65th edition and International Maritime Dangerous Goods Regulations (IMDG). The only DOT requirement for shipping these batteries is special provision 130 which states: “Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals). The only requirements for shipping these batteries by IATA is Special Provision A123 and US DOT in special provisions 49 CFR 172.102 Provision 130, 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." The international Maritime Dangerous Goods Code (IMDG) does not regulate such type of batteries. IMDG only regulate those batteries containing dry potassium hydroxide for ocean transportation under Special Provision 304 which says : “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.” The Batteries, dry, do not containing dry potassium hydroxide are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits. Example of such batteries is: alkali-manganese, zinc-carbon, and nickel-cadmium batteries.

Non-dangerous goods.

Such battery has been packed in inner packaging in such a manner as to effectively prevent short circuit and movement that could lead to short circuit.

IMO information is not regulated.

Section 15 – Regulatory Information

Special requirement be according to the local regulations.

Section 16 – Other Information

The data in this Material Safety Data Sheet relates only to the specific material designated herein. However, the data is provided without any warranty; expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to assume liability on loss, injury, damage, or expense resulting from improper use of this product. We urge you to make this information available as appropriate in your organization and to any others with whom you arrange to handle this product.