

GP Batteries

Material Safety Data Sheet

Model No.: GP Silver Oxide cells

Document Number: MSDS-PPS-001

Revision:1

Page 1 of 4

IDENTITY (As Used on Label and List)
Zinc Silver Oxide battery

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 Silver Oxide Battery (SR)
Manufacturer's name, address, telephone number	GP Battery Marketing (HK) Limited. 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, 2021

Section 2 – Hazards Identification

Improper handling of the battery could lead to distortion, leakage*, overheating, or explosion and cause human injury or equipment trouble. Especially touch with liquid leaked out of battery could cause injury like a loss of eyesight. Please strictly observe safety instructions.

(* Leakage is defined as an unintended escape of liquid from a battery.)

Section 3 – Composition/Information On Ingredients

Ingredient	CAS#	Content (wt %)
Silver Oxide (Ag ₂ O)	20667-12-3	5 to 45
Manganese Dioxide (MnO ₂)	1313-13-9	0 to 30
Potassium Hydroxide (KOH)	1310-58-3	0 to 5
Sodium Hydroxide (NaOH)	1310-73-2	0 to 3
Mercury (Hg)	7439-97-6	Not used
Zinc (Zn)	7440-66-6	2 to 15
Carbon (C)	7782-42-5	0 to 5

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. Rinse by plenty of water 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

GP Batteries

Material Safety Data Sheet

Model No.: GP Silver Oxide cells

Document Number: MSDS-PPS-001

Revision:1

Page 2 of 4

Section 5 – Fire-Fighting Measures

- a) Suitable (and unsuitable) Extinguishing Media
Any class of extinguisher is effective.
- b) Special Fire Fighting Procedures
Protective equipment: Wear self-contained respirator and fully protective impervious suit.
Not to inhale or not to come into eyes or skin with harmful alkaline mist.
- 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 wipe it with a dry cloth. If the liquid comes into contact with the skin, see section 4 – First Aid Measures.

Section 7 – Handling and Storage

a) Handling

- Do not recharge.
- Do not puncture or abuse.
- Never swallow.
- New touch liquid leading from a battery.
- Never short-circuit the battery.
- Never expose to naked flames – exposing to naked flames can caused 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:	N/A
Protective Gloves:	N/A
Eye Protection:	N/A
Other Protective Clothing	N/A

Section 9 - Physical / Chemical Properties

Button shape with primary cell of 1.55V nominal voltage.

Section 10 – Stability and Reactivity

Stable or Unstable:	Stable (Performance deterioration depends on circumstance)
Incompatibility (Materials to avoid)	N/A
Hazardous Decomposition or By products:	N/A
Hazardous Polymerization:	N/A
Conditions to avoid:	See section 7.

GP Batteries

Material Safety Data Sheet

Model No.: GP Silver Oxide cells

Document Number: MSDS-PPS-001

Revision:1

Page 3 of 4

Section 11 – Toxicological Information

As the contents are sealed in battery case, there is no toxicity.

Section 12 – Ecological Information

If the battery is disposed of on land or in water, the battery case may corrode and liquid leak from the battery. Ecological information has not been reported.

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.

As electric capacity is left in a discarded battery and it comes into contact with other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.

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

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 62th 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 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." 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

Major environmental regulation is as follows: EU Battery Directive 2006/66/EC(2013/56/EU)

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.

GP Batteries

Material Safety Data Sheet

Model No.: GP Silver Oxide cells

Document Number: MSDS-PPS-001

Revision:1

Page 4 of 4