GP Batteries

Safety Data Sheet for Alkaline 9V Battery (Model: 1604A)

Document Number: SDS101 Revision: 03 Date of prepared: 5 Jan 2017

Section I – Product and Company Identification

Information of Product

Product Identity (used on the label)	Alkaline 9V battery

Information of Manufacturer

Manufacturer's Name GPI International Ltd.	**Emergency Telephone Number** Within USA & Canada call: +1-800-424-9300 Outside USA and Canada call: +1-703-527-3887
Address (Number, Street, City State, and ZIP Code) 7/F, Building 16W, 16 Science Park West Avenue Hong Kong Science Park, New Territories, Hong Kong	**Telephone Number for Information** +852-24843333
	Date of prepared and revised 5 Jan, 2017

Recommended use of chemicals:

Don't directly connect (+) and (-) of a battery to make a short circuit. Don't disassemble, heat or put the battery into fire.

Section II – Hazards Identification

GHS Classification: N.A.

Under normal conditions of use, the battery is hermetically sealed. If the electrolyte is leaked, hazardous material may be released.

GHS Label elements, including precautionary statements:

Under normal conditions of use, the battery is hermetically sealed, no hazards are available.

GHS Label: Not applicable with normal use.

Signal word	N.A.
Hazard Statement	General advice: The common known rules for handling of chemicals should be obeyed. These chemicals are contained in a sealed steel can. For consumer use, adequate hazard warnings are printed on both the package and the battery. Potential for exposure should not exist unless the battery leaks, is exposed to high temperatures or is mechanically or electrically abused. Concentrated

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potassium hydroxide contained is caustic. Anticipated potential leakage of potassium hydroxide is 2-20 ml, depending on battery size. Do not eat and drink batteries. Keep batteries away from small children.
This preparation is not classified as dangerous according to the criteria of directive 99/45/EEC.
If battery leaking, exposure to caustic ingredients may occur. Therefore, may cause sensitization by skin contract.

Precautionary Statements	Obtain special instructions before use
Disposal	The battery cell remains in the environment. Do not throw it out into the environment. Disposal of contents/container in accordance with local regulation
Response	Refer to Section 4 – First-aid Measures if electrolyte leaks
Storage	Refer to Section 7 – Handling and Storage
Specific Hazards	N.A.

Section 3 – Composition/Information on Ingredients

Chemical Nature: Alkaline zinc-manganese dioxide batteries

MATERIALS	CAS#	APPROXIMATE PERCENT OF TOTAL WEIGHT (~%)
Manganese Dioxide (MnO_2)	1313-13-9	33.1
Zinc (Zn)	7440-66-6	12.8
Water (H_2O)	7732-18-5	6.1
Potassium Hydroxide (KOH)	1310-58-3	1.5
Graphite	7782-42-5	1.8
Brass	12597-71-6	4.3
Steel	7439-89-6	26.8
Ni-plating	7440-02-0	0.3
Nylon-66	None	1.3
Fiber	None	1.2
PBT plastic	26062-94-2	10.8

IMPURITY	CAS#	APPROXIMATE PERCENT OF TOTAL WEIGHT (~%)
Mercury (Hg)	7439-97-6	<0.0001
Lead (Pb)	7439-92-1	<0.0030
Cadmium (Cd)	7440-43-9	<0.0003
Arsenic (As)	7440-38-2	<0.0001

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Section 4 – First-aid Measures

Inhalation: In case of excessive inhalation due to leaking batteries remove to fresh air. Obtain medical advice.
Skin Contact: If exposed to a leaking battery, remove contaminated clothing. Wash exposed areas with plenty of water and soap. If irritation occurs, consult a physician.
Eye contact: If a battery is leaking and materials contact eyes, flush immediately with running water for at least 15 minutes. Consult an ophthalmologist at once.
Ingestion: Not anticipated due to size of batteries. Choking may occur with the smaller size batteries. If exposed to a leaking battery, rinse mouth and surrounding areas with running water for at least 15 minutes. Give plenty of water to drink. Do not induce vomiting. Obtain medical advice.

Section 5 – Fire-fighting Measures

Suitable extinguishing media: Carbon dioxide (CO2), foam, dry chemical powder.
Extinguishing media not to be used: Never use a direct water jet.
Exposure hazards from combustion products: In case of fire, carbon dioxide, carbon monoxide and other toxic organic substances will be generated. Do not inhale fumes and smoke.
Personal protective equipments: Wear full protective clothing. Use self-contained breathing apparatus.

Section 6 – Accidental Release Measures

Personal precautions: Notify safety personnel of large spills. Caustic potassium hydroxide may be released from leaking or ruptured batteries. Avoid eye or skin contact and inhalation of vapours. Increase the ventilation. Wear protective clothing. Keep unprotected persons away.
Environmental precautions: Avoid discharge and penetration into sewerage systems, waterways, pits, and cellars.
Methods for cleaning up: Collect spilled material with an insert standard absorbent like sand or silica. Care for well-ventilated conditions. Recycle or dispose of the materials in an appropriate way.

Section 7 – Handling and Storage

General handling:
Obey the common known rules and precautions for handling with chemicals. Avoid mechanical and electrical abuse. Do not short battery or install incorrectly. Batteries may explode, pyrolize or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries according to equipment instructions. Do not mix battery systems, such as alkaline and zinc- carbon. Replace all batteries in equipment at the same time. Do not carry batteries loose in pocket or bag. Do not remove battery labels.

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Storage:

Store product in well-filled, appropriate coated and tightly closed containers avoiding influence of oxygen/air, light and humidity. Storage at room temperature.

Section 8 – Exposure Controls/Personal Protection

Exposition/Technical measures: Atmospheric vapour concentrations must be minimized by adequate ventilation.
Protection of hands, eyes and skin: None required under normal use conditions. When handling leaking batteries, use neoprene, rubber or nitrile gloves and wear safety glasses to protect hands, eyes and skin.
General safety and hygiene measures: Use only as directed.

Section 9 – Physical and Chemical Properties

Physical state: Stainless steel top battery
Colour: Contents dark and gray in colour
Odour: N.A.
Melting point: N.A.
Boiling point: N.A.
Flash point: N.A.
Explosion limit: Not available
Ignition temperature: Not available
Vapour pressure: Not available
Specific gravity: N.A.
Solubility in water: N.A.
Solubility in other solvents: N.A.
PH value: Not available
Partition coefficient: Not available
Viscosity: Not available

Section 10 – Stability and Reactivity

Stability: Stable under normal use
Thermal decomposition: Batteries may burst and release hazardous decomposition products when exposed to fire.
Substances to avoid: Strong oxidation agents.
Hazardous reactions: Contents incompatible with strong oxidizing agents.
Hazardous decomposition products: Thermal degradation may produce hazardous fumes of zinc and manganese; hydrogen gas; caustic vapors of potassium hydroxide and other toxic by-products.

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Section 11 – Toxicological Information

Route of Entry

Inhalation	N.A.
Skin	N.A.
Ingestion	Ingestion of a battery can be harmful.

Health Hazard (Acute and Chronic) / Toxicological Information

There is no toxicity data for Battery. The battery is nontoxic because the chemical mixture from battery is sealed by the metal container.

Section 12 – Ecological Information

Persistence/degradability :

Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.

Section 13 – Disposal Considerations

Product: Dispose in accordance with appropriate regulations. If in doubt, contact your local government office concerned for information. Do not incinerate, since batteries may explode at excessive temperatures.

Recommended methods for safe and environmentally preferred disposal :

Product (waste from residues)

(1) Dispose of in a manner consistent with regulations. Below some references:

European Community: The removed batteries have to be treated according to the Battery directive 2006/66/EC

(2) For safety purpose, insulation measures are need to avoid heat or rupture caused by short-circuit, such as film on terminals, insulation bag or original package for packing.

Contaminated packaging

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates them, dispose them as industrial wastes subject to special control.

Section 14 – Transport Information

UN Number: N.A.					
UN Proper Shipping Name: N.A.					
UN: N.A.					
Shipping	**Regulation**	**Packing**	**Transport**	**Environmental**	**Special**

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mode/ Country		Group/Special Provision	Hazard Class	Hazards	Precautions
USA	US DOT 49CFR	SP 130	Non-dangerous goods	No marine pollutant	prevent a short-circuit
Air	ICAO/IATA DGR 58th edition	A123	Non-dangerous goods	No marine pollutant	1.prevent a short-circuit 2.containing corrosive electrolyte which will not flow out of the battery
Sea	IMO/IMDG CODE 37-14	SP 304	Non-dangerous goods	No marine pollutant	prevent a short-circuit
Road/Rail	N.A.	N.A.	N.A.	N.A.	N.A.

GP batteries are considered to be “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 58th 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.

Section 15 – Regulatory Information

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Special requirement be according to the local regulations.

Section XVI – Other Information

The data in this 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. Any previous MSDS of this product mentioned above are hereby replaced with this new document. 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.

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