

Material Safety Data Sheet for GP Carbon Zinc batteries

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|--|---|---|---------------------------------|
| IDENTITY (As Used on Label and List) Carbon Zinc | Note: Blank spaces are not permitt marked to indicate that. | red if any item is not applicable or no information | is available, the space must be |
| Section I | | | |
| Manufacturer's Name GPI International Ltd. | Emergency Telephone Number | | |
| Address (Number, Street, City State, and ZIP Code) 8/F GP Building, 30 Kwai Wing Road, | Telephone Number for information | 852-2484-3333 | |
| Kwai Chung, N.T. H.K. | Date of prepared and revision Sep 8, 2011 Signature of Prepare (optional) | | |
| Section II - Hazardou | us Ingredients / Identity | Information | |
| Hazardous Components: | <u>g</u> | | |
| Description: | Approximate % of total weight | | |
| | | | |
| Lead | : <0.2 | Wt% | |
| Mercury | : <00001 | Wt% | |
| Cadmium | : <0.001 | Wt% | |
| | | | |
| | | | |
| Section III - Physical / | Chemical Characteristics | | |
| Boiling Point | Specific Gravity (H ₂ O=1) | , | |
| N.A. | 7.11 | N.A. | |
| Vapor Pressure (mm Hg) N.A. | Melting Point | N.A. | |
| Vapor Density (AIR=1) N.A. | Evaporation Rate (Butyl Acetate) | N.A. | |
| Solubility in Water N.A. | | | |
| Appearance and Odor | Cylindr | rical Shape, odorless | |
| Section IV – Hazard | Classification | | |
| Classification N.A. | | | |
| | | | |
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| Section V | – Reactivit | v Data | | | | | |
| Stability | Unstable | | Conditio | ns to Avoid | | | |
| | Stable | | | | | | |
| | Stable | X | | | | | |
| Incompatibility (| Materials to Avoi | d) | 1 | | | | |
| Hazardous Deco | mposition or Bypr | roducts | | | | | |
| Hazardous | May Occur | | Conditio | ns to Avoid | | | |
| Polymerization | • | | Conditio | ns to rivola | | | |
| | Will Not Occur | X | | | | | |
| | 1 | 1 | 1 | | | | |
| Section VI | - Health H | azard Data | | | | | |
| Route(s) of | | Inhalation? | | Skin? | | Ingestion? | |
| Entry | | | N. | A. | | N.A. | N.A. |
| Health Hazar | d (Acute and C | Chronic) / Toxio | clogical | information | | | |
| | | | | | | | |
| In case of | of electrolyte leak | age, skin will be ito | chy when c | contaminated with electron | olyte. | | |
| In conta | ct with electrolyte | can cause severe i | rritation a | nd chemical burns. | | | |
| Inhalatio | on of electrolyte v | apors may cause ir | ritation of | the upper respiratory tra | ct and l | ungs. | |
| | | | | | | | |
| Section VI | I – First Aid | d Measures | | | | | |
| First Aid Prod | cedures | | | | | | |
| | | | | | | | |
| | | | | tin, wash with plenty of | | | |
| If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician. | | | | | | | |
| If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area. | | | | | | | |
| | | | | | | | |
| Section VI | II - Fire and | d Explosion | Haza | rd Data | | | |
| Flash Point (Met | | Ignition Temp. | | Flammable Limits | L | EL | UEL |
| N. | A. | N.A. | | N.A. | | N.A. | N.A. |
| Extinguishing M | edia | | | | | | |
| Carbon | Dioxide, Dry Che | mical or Foam exti | nguishers | | | | |
| Special Fire Figh | nting Procedures | | | | | | |
| N.A. | | | | | | | |
| Unusual Fire and | Explosion Hazar | ds | | | | | |
| Do not dispose of battery in fire - may explode. | | | | | | | |
| Do not s | short-circuit batter | y - may cause burr | ıs. | | | | |
| | | | | | | | |



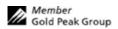
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| Section IX | - Accidental Release or S | Spillage | |
|-------------------|---|---|---|
| | aken in Case Material is Released | , , | |
| Batteri | ies that are leakage should be handled with | rubber gloves. | |
| Avoid | direct contact with electrolyte. | | |
| Wear 1 | protective clothing and a positive pressure S | Self-Contained Breathing Apparatus (SCBA). | |
| | | | |
| Section X | Handling and Storage | _ | |
| | and storage advice | | |
| Batte | eries should be handled and stored carefully | y to avoid short circuits. | |
| | | al objects to be mixed with stored batteries. | |
| | er disassemble a battery. | | |
| | not breathe cell vapors or touch internal mat | terial with bare hands. | |
| The | | th temperature ,the maximum temperature allowed is 60 | 0 for a short period during the shipment, |
| | | | |
| | – Exposure Controls / Per | rson Protection | |
| Occupational Exp | | STEP | |
| | N.A. | N.A. | |
| Respiratory Prote | ection (Specify Type) N.A. | | |
| Ventilation | Local Exhausts | Special | |
| | N.A. | N.A. | |
| | Mechanical (General) | Other | |
| | N.A. | N.A. | |
| Protective Glove | s | Eye Protection | |
| N.A. | | N.A. | |
| Other Protective | Clothing or Equipment | | |
| | N.A. | | |
| Work / Hygienic | Practices N.A. | | |
| | | | |
| Section XI | I – Ecological Information | | |
| | N.A. | | |
| | | | |
| Section XI | II – Disposal Method | | |
| Dispose of | f batteries according to government regulati | ions | |





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Section XIV – Transportation Information

In general, all batteries in all forms of transportation (ground, air, or ocean) 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 GP Carbon Zinc batteries has been designed to be compliant with these regulatory concerns.

Carbon Zinc batteries (sometimes referred to as "Dry cell" batteries) are not listed as dangerous goods under the IATA Dangerous Goods Regulation 52 Edition 2011, 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.

| Regulatory Body | Special Provisions |
|-----------------|------------------------------|
| ADR | 295 - 304, 598 |
| IMDG | UN 3028 Provisions 295 - 304 |
| UN | UN 3028 Provisions 295 - 304 |
| US DOT | 49 CFR 172.102 Provision 130 |
| IATA | A123 |
| ICAO | UN 3028 Provisions 295 - 304 |

All GP Carbon Zinc batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

Non-dangerous goods.

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

Section XV – Regulatory Information

Special requirement be according to the local regulatories.

Section XVI – Other Information

The data in this Material Safety Data Sheet relates only to the specific material designated herein.

Section XVII - Measures for fire extinction

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.