GP Batteries Material Safety Data Sheet for GP 9V Alkaline Batteries

Document Number: MNAB005

Revision:04

Page1 of 4

| IDENTITY (As Used on Label and List) GP 9V alkaline batteries | 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 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 Preparer (optional) | | |

Section II - Hazardous Ingredients / Identity Information

| Hazardous Components: | | | |
|---|-------------|-------------------|-----|
| Description: | Approximate | % of total weight | |
| Lead (Pb) | : | < 25 | ppm |
| Mercury (Hg) | : | < 1 | ppm |
| Cadmium (Cd) | : | < 3 | ppm |
| Hexavalent Chromium (Cr ⁶⁺) | : | < 3 | ppm |
| Polybrominated Biphenyls (PBBs) | : | N/A | |
| Polybrominated Diphenyl Ethers (PBDEs) | : | N/A | |
| MnO2 | : | 29-30 | Wt% |
| Zn | : | 10 | Wt% |
| KOH (40%) | : | 15 | Wt% |

Section III - Physical / Chemical Characteristics **Boiling Point** Specific Gravity (H₂O=1) N.A N.A. Vapor Pressure (mm Hg) Melting Point N.A. N.A Vapor Density (AIR=1) Evaporation Rate (Butyl Acetate) N.A N.A. Solubility in Water N.A. Appearance and Odor Prismatic Shape, odorless

Section IV – Hazard Classification

Classification

N.A.

GP Batteries Material Safety Data Sheet for GP 9V Alkaline Batteries

Document Number: MNAB005 Revision:04 Page2 of 4 Section V - Reactivity Data Stability Unstable Conditions to Avoid Stable Х Incompatibility (Materials to Avoid) Hazardous Decomposition or Byproducts Hazardous May Occur Conditions to Avoid Polymerization Will Not Occur Х Section VI - Health Hazard Data Route(s) of Inhalation? Skin? Ingestion? Entry N.A. N.A. N.A. Health Hazard (Acute and Chronic) / Toxicological information In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte. In contact with electrolyte can cause severe irritation and chemical burns Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs. Section VII – First Aid Measures First Aid Procedures If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately. 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 VIII - Fire and Explosion Hazard Data Flash Point (Method Used) Ignition Temp. Flammable Limits LEL UEL N.A N.A. N.A. N.A. N.A. Extinguishing Media Carbon Dioxide, Dry Chemical or Foam extinguishers Special Fire Fighting Procedures N.A. Unusual Fire and Explosion Hazards Do not dispose of battery in fire - may explode. Do not short-circuit battery - may cause burns.

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

GP Batteries Material Safety Data Sheet for GP 9V Alkaline Batteries

Document Number: MNAB005

Revision:04

Page3 of 4

Section IX – Accidental Release or Spillage

Steps to Be Taken in Case Material is Released or Spilled

Batteries that are leakage should be handled with rubber gloves. Avoid direct contact with electrolyte.

Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).

Section X – Handling and Storage

Safe handling and storage advice

| Batteries should be handled and stored carefully to avoid short circuits. | | |
|--|--|--|
| Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries. | | |
| Never disassemble a battery. | | |
| Do not breathe cell vapors or touch internal material with bare hands. | | |
| The cells and batteries shall not be stored in high temperature, the maximum temperature allowed is 60 | for a short period during the shipment | |

The cells and batteries shall not be stored in high temperature ,the maximum temperature allowed is 60 for a short period during the shi Otherwise the cells maybe leakage and can result in shortened service life..

| Section X | I – Exposure Controls / Per | son Protection |
|------------------------------------|-----------------------------|----------------|
| Occupational Exposure Limits: LTEP | | STEP |
| N.A. | | N.A. |
| Respiratory Prot | tection (Specify Type) | |
| | N.A. | |
| Ventilation | Local Exhausts | Special |
| | N.A. | N.A. |
| | Mechanical (General) | Other |
| | N.A. | N.A. |
| Protective Gloves | | Eye Protection |
| N.A. | | N.A. |
| Other Protective | e Clothing or Equipment | · · · |
| | N.A. | |
| Work / Hygienic | c Practices | |
| | N.A. | |
| | | |

Section XII – Ecological Information

N.A.

Section XIII – Disposal Method

Dispose of batteries according to government regulations.



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Document Number: MNAB005

Revision:04

Page4 of 4

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 alkaline batteries has been designed to be compliant with these regulatory concerns. Alkaline 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 alkaline 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.

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