

# GP Batteries

## Material Safety Data Sheet for Lithium coin battery

Document Number: MCRA100

Revision:02

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IDENTITY (As Used on Label and List) Lithium coin 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.
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### 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, Kwai Chung, N.T. H.K.	Telephone Number for information 852-2484-3333
	Date of prepared and revision Mar 26, 2008.
	Signature of Preparer (optional)

### Section II - Hazardous Ingredients / Identity Information

Hazardous Components:

Description:	Approximate % of total weight
Lead	: 0.004 Wt%
Mercury	: 0.0001 Wt%
Cadmium	: 0.001 Wt%
Metallic Lithium	: 2-3 Wt%

### Section III - Physical / Chemical Characteristics

Boiling Point N.A.	Specific Gravity (H <sub>2</sub> O=1) 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	Cylindrical Shape, odorless

### Section IV – Hazard Classification

Classification N.A.
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### Section V – Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

### Section VI - Health Hazard Data

Route(s) of Entry	Inhalation?	Skin?	Ingestion?
	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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### 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.

Keep batteries between -30°C and 35°C for prolong storage.

### Section XI – Exposure Controls / Person Protection

Occupational Exposure Limits: LTEP

N.A.

STEP

N.A.

Respiratory Protection (Specify Type)

N.A.

Ventilation

Local Exhausts

N.A.

Special

N.A.

Mechanical (General)

N.A.

Other

N.A.

Protective Gloves

N.A.

Eye Protection

N.A.

Other Protective Clothing or Equipment

N.A.

Work / Hygienic Practices

N.A.

### Section XII – Ecological Information

N.A.

### Section XIII – Disposal Method

Dispose of batteries according to government regulations.

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### Section XIV – Transportation Information

GP lithium cells and batteries are not subject to the requirements of the U.S. hazardous materials regulations pursuant to 49 CFR 173.185(b), IATA Dangerous Goods Regulations pursuant to Special Provision A45, and IMDG Code pursuant to Special Provision 188. Each GP cell or battery has been tested under provisions of the UN Manual of Tests and Criteria, Part III, Sub-section 38.3. If GP lithium cells are used to construct battery packs, the assembler of that pack is responsible to ensure the battery has been tested in accordance with the requirements contained in the UN Manual of Tests and Criteria and shipped in accordance with applicable regulations. Batteries must be packaged and offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals) and protects against short circuits. The international Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says : Batteries, dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits

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 regulatory.

### 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.

### WEIGHT OF LITHIUM FOR LITHIUM BATTERY

Battery type	Model	Weight of cell (g)	Aggregated lithium equivalent content (g)
Coin-type	GPCR1025	0.6	0.009
	GPCR1216	0.6	0.009
	GPCR1220	0.8	0.011
	GPCR1616	1.1	0.017
	GPCR1620	1.2	0.02
	GPCR2016	1.7	0.026
	GPCR2025	2.4	0.045
	GPCR2032	3.2	0.062
	GPCR2430	4.0	0.082
	GPCR2450	6.6	0.173