

# GP Batteries

## Material Safety Data Sheet for GP Lithium coin battery (Lithium Metal Battery)

Document Number: MCRA100

Revision:23

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IDENTITY (As Used on Label and List)  
Lithium metal 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 1- Identification

|  |   |
|--|---|
| Manufacturer's Name<br>GPI International Ltd.  | Emergency Telephone Number                        |
| Address ( Number, Street, City State, and ZIP Code)<br>8/F GP Building, 30 Kwai Wing Road, | Telephone Number for information<br>852-2484-3333 |
| Kwai Chung, N.T. H.K.  | Date of prepared and revision<br>Jan 1, 2016      |
|  | Signature of Prepare (optional)                   |

### Section 2 – Hazards Identification

Classification:

N.A.

### Section 3 – Composition/Information On Ingredients

Hazardous Components:

| Description: | CAS Number | Approximate % of total weight |
|--------------|------------|-------------------------------|
| Lead         | 7439-92-1  | <0.004 Wt%                    |
| Mercury      | 7439-97-6  | <0.0001 Wt%                   |
| Cadmium      | 7440-43-9  | <0.001 Wt%                    |
| Lithium      | 7439-93-2  | 2-3 Wt%                       |

### Section 4 – 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 5 – Fire-Fighting Measures

|                                   |                        |                          |             |             |
|-----------------------------------|------------------------|--------------------------|-------------|-------------|
| Flash Point (Method Used)<br>N.A. | Ignition Temp.<br>N.A. | Flammable Limits<br>N.A. | LEL<br>N.A. | UEL<br>N.A. |
|-----------------------------------|------------------------|--------------------------|-------------|-------------|

Extinguishing Media

Carbon Dioxide, Dry Chemical or Foam extinguishers

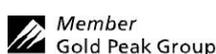
Special Fire Fighting Procedures

N.A.

Unusual Fire and Explosion Hazards

Do not dispose of battery in fire - may explode.

Do not short-circuit battery - may cause burns.



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

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### Section 6 – Accidental Release Measures

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 7 – 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°C for a short period during the shipment , Otherwise the cells maybe leakage and can result in shortened service life..

### Section 8– Exposure Controls / Person Protection

|  |                      |                |
|--|----------------------|----------------|
| Occupational Exposure Limits:          | LTEP                 | STEP           |
|  | N.A.                 | N.A.           |
| Respiratory Protection (Specify Type)  | N.A.                 |                |
| Ventilation                            | Local Exhausts       | Special        |
|  | N.A.                 | N.A.           |
|  | Mechanical (General) | Other          |
|  | N.A.                 | N.A.           |
| Protective Gloves                      | N.A.                 | Eye Protection |
|  |                      | N.A.           |
| Other Protective Clothing or Equipment | N.A.                 |                |
| Work / Hygienic Practices              | N.A.                 |                |

### Section 9 - Physical / Chemical Properties

|                        |                                       |
|------------------------|---------------------------------------|
| Boiling Point          | Specific Gravity (H <sub>2</sub> O=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    | Coin (button) Shape, odorless         |

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### Section 10 – Stability and Reactivity

|           |          |   |                     |
|-----------|----------|---|---------------------|
| 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 11 – Toxicological Information

|   |             |      |       |      |            |      |
|---|-------------|------|-------|------|------------|------|
| Route(s) of Entry   | Inhalation? | N.A. | Skin? | N.A. | Ingestion? | 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 12 – Ecological Information

N.A.

### Section 13 – Disposal Considerations

Dispose of batteries according to government regulations.

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### Section 14 – 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 lithium batteries are compliant with these regulatory concerns.

GP lithium manganese dioxide batteries are exempt from the classification as dangerous goods as they meet the requirements of the special provisions listed below. (Essentially, they are properly packaged and labeled, contain less than 1 gram of lithium and pass the tests defined in UN model regulation section 38.3).

| Regulatory Body                     | Special Provisions               |
|-------------------------------------|----------------------------------|
| ADR                                 | 188, 230, 310, 636, 656          |
| IMDG                                | 188, 230, 310, 957               |
| UN                                  | UN 3090, UN 3091                 |
| US DOT                              | 29, A54, A100, A101              |
| ICAO, IATA 57 <sup>th</sup> edition | Packaging Instructions 968 - 970 |
| Transport Canada TDG                | 34                               |

### WEIGHT OF LITHIUM FOR LITHIUM BATTERY

| Battery type | Model     | Weight of cell (g) | Aggregated lithium equivalent content (g) |
|--------------|-----------|--------------------|---|
| Coin cell    | GPCR1025  | 0.6                | 0.01                                      |
|              | GPCR1216  | 0.7                | 0.01                                      |
|              | GPCR1220  | 0.8                | 0.01                                      |
|              | GPCR1616  | 1.1                | 0.02                                      |
|              | GPCR1620  | 1.2                | 0.02                                      |
|              | GPCR1632  | 1.9                | 0.02                                      |
|              | GPCR2016  | 2.4                | 0.03                                      |
|              | GPCR2025  | 3.2                | 0.06                                      |
|              | GPCR2032  | 4.3                | 0.07                                      |
|              | GPCR2430  | 6.6                | 0.09                                      |
|              | GPCR2450  | 2.8                | 0.17                                      |
|              | NTCR2032E |                    |   |

### Section 15 – Regulatory Information

Special requirement be according to the local regulatory.

### Section 16 – Other Information

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

### Section 17 – 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.