Material Safety Data Sheet for GP Lithium coin cell (Lithium Metal Battery) Section II

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 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 Jan 04, 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
Mercury	7439-97-6	0
Cadmium	7440-43-9	0
Lithium	7439-93-2	~2Wt%
Manganese Dioxide	1313-13-9	~31Wt%
Graphite	7782-42-5	~3Wt%
Iron	7439-89-6	~55Wt%
Organic electrolyte	N.A.	~8%
Others	N.A.	Balance

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.

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Section 5 – Fire-Fighting Measures

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.

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℃ 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 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 9 - Physical / Chemical Properties

Boiling Point N.A.	Specific Gravity (H_2O=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 Coin Shape, odorless	

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.

Section 14 – Transportation Information

All GP lithium coin cell (Lithium Metal Battery) shown in this MSDS comply to the necessary requirements under the UN Recommendations on the Transport of Dangerous Goods Model Regulations and UN Manual of Tests and Criteria as referenced in the following transportation regulations:

1. UN Recommendation on the Transport of Dangerous Goods Model Regulations
2. U.S. Department of Transportation hazardous materials regulations (HMR)
3. International Civil Aviation Organization (ICAO) Technical Instruction,
4. International Air Transport Association (IATA) Dangerous Goods Regulations, Partially Regulated DG section II of PI 968 and
5. International Maritime Dangerous Goods (IMDG) Code. Special Provision 188, Special Provision 230 & Special Provision 903

GP lithium batteries are exempted from these regulations since they meet all UN Testing requirements and not exceed 1g lithium equivalent for single cell and 2 g lithium equivalent for battery. (UN3090) Non-dangerous Goods.

All GP lithium batteries (Lithium Metal Battery) packaging complies with Partially regulated DG section II of PI 968. Transport of cells or batteries packed with or contained in equipment have to follow the appropriate regulations for UN3091

UN No.	**Shipping modes**	**Regulations**	**Packing instructions**	**Limit of Aggregated lithium content**	**Classification**	**Lithium handling label**	**Class 9 DG label**
UN3090	USA	US Department of Transportation of Hazardous Substances (HMR) 49 CFR § 173.185		1 g (cell)/2 g (battery)	Non-dangerous goods	Needed	Not necessary
	Air	ICAO/IATA DGR 57th edition	PI968 Section II	< 0.3 g (cell/battery)	Partially regulated dangerous goods	Needed	Not necessary
	Sea	IMO/IMDG Code 35-10	P903	1 g (cell)/2 g (battery)	Non-dangerous goods	Needed	Not necessary
	Road/Rail	ADR / RID	P903 P903a P903b	1 g (cell)/2 g (battery)	Non-dangerous goods	Needed	Not necessary

WEIGHT OF LITHIUM FOR LITHIUM BATTERY

Battery type	Model	Weight of cell (g)	Aggregated lithium equivalent content (g)
Cell	GPCR2032 GPCR2025 GPCR2016	3.0 2.5 1.7	0.06 0.05 0.03

Section 15 – Regulatory Information

Special requirement be according to the local regulatory.

Section 16 – Other Information

Member
Gold Peak Group

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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.

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