

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

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IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted if any item is not applicable or no
Lithium Metal batteries	information is available, the space must be marked to indicate that.
Section 1- Identification	
Manufacturer's Name	Emergency Telephone Number
GPI International Ltd.	
Address ( Number, Street, City State, and	Telephone Number for information
ZIP Code)	852-2484-3333
8/F GP Building, 30 Kwai Wing Road,	
	Date of prepared and revision
Kwai Chung, N.T. H.K.	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.

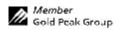
If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician.

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-Figh	ting 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 exti	nguishers		
Special Fire Fighting Procedu	ures			
N.A.				
Unusual Fire and Explosion 1	Hazards			
Do not dispose of batt	ery in fire - may explo	de.		
Do not short-circuit ba	attery - may cause burn	ıs.		
Section 6 - Accident	al Release Meas	ures		
Steps to Be Taken in Case Ma	aterial is Released or S	pilled		
Batteries that are leak	kage should be handled	with rubber gloves.		
Avoid direct contact	with electrolyte.			
Wear protective cloth	ning and a positive pres	ssure Self-Contained Bre	eathing Apparatus (SCE	3A).
Section 7 - Handling	and Storage			
Safe handling and storage adv	vice			
Batteries should be	handled and stored car	efully to avoid short circ	cuits.	
		v metal objects to be mix		 S.
Never disassemble a		3		
	•	al material with bare han	ds.	
				allowed is 60°C for a short
			_	
	<u> </u>	e cells maybe leakage an	id can result in snortene	d service me
Section 8– Exposure Occupational Exposure Limit		on Protection STEP		
Occupational Exposure Linii		SIEP	NI A	
Dominatory Dustastian (Co.)	N.A.		N.A.	
Respiratory Protection (Special			N. A	
Ventilation Local Exhau	sts N.A	. Special	N.A.	



Work / Hygienic Practices

Protective Gloves

Mechanical (General)

Other Protective Clothing or Equipment

N.A.

N.A.

N.A.

Other

Eye Protection

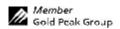
N.A.

N.A.

# **GP** Batteries

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l Properties				
Specific Gravity (H <sub>2</sub> O=1)				
N.A.				
_				
·				
Coin Change adouless				
Coin Snape, odoriess				
ctivity				
Conditions to Avoid				
Conditions to Avoid				
X				
ormation				
N.A. Skin? N.A. Ingestion?	N.A.			
/ Toxicological information				
severe irritation and chemical burns.				
cause irritation of the upper respiratory tract and lungs				
ation				
rations				
Annion regulations.				
formation				
we e	Specific Gravity (H <sub>2</sub> O=1) N.A.  Melting Point N.A.  Evaporation Rate (Butyl Acetate) N.A.  Coin Shape, odorless  Conditions to Avoid  X  Conditions to Avoid  X  Commation			





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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,
- 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	UN3090 USA US Department of Transport Hazardous Substances (HMF § 173.185		1	1 g (cell)/2 g (battery)	Non-dangerous goods	Needed	Not necessary
	Air	ICAO/IATA DGR 57 <sup>th</sup> 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

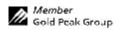
#### WEIGHT OF LITHIUM FOR LITHIUM BATTERY

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

#### Section 15 – Regulatory Information

Special requirement be according to the local regulatory.

#### Section 16 - Other Information



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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.

