

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

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IDENTITY (As Used on Label and List)	Note: Blank spaces are not permitted if any item is not			
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.	May 19, 2014			
	Signature of Prepare (optional)			

### Section 2 – Hazards Identification

Classification:

N.A.

Hazardous Components:			
Description:	CAS Number	Approximate % of total weight	
Lead	7439-92-1	<0.004 Wt%	
Mercury	7439-97-6	<0.0005 Wt%	
Cadmium	7440-43-9	<0.002 Wt%	
Lithium	7439-93-2	1.2-6.7 Wt%	

|--|

> 0.1 Wt%1,2-dimethoxyethane; ethylene glycol 110-71-4

dimethyl ether (EGDME)

## **Section 4 – First Aid Measures**

First Aid Procedures

If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.

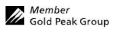
If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, and contact a physician.

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 exti	nguishers				
Special Fire Fighting Proced	ures					
N.A.						
Unusual Fire and Explosion	Hazards					
Do not dispose of batt	tery in fire - may explo	de.				
Do not short-circuit be	attery - may cause burr	is.				
Section 6 - Accident	al Release Meas	ures				
Steps to Be Taken in Case M	aterial is Released or S	pilled				
Batteries that are leal	kage should be handled	with rubber gloves.				
Avoid direct contact	with electrolyte.					
Wear protective clotl	hing and a positive pres	ssure Self-Contained Br	eathing Apparatus (SCF	BA).		
Section 7 – Handling	and Storage					
Safe handling and storage adv	vice					
D. W 111.	1 11. 1 1 1		9.			
		refully to avoid short cir				
		w metal objects to be mi	xed with stored batterie	S.		
Never disassemble	•					
	*	al material with bare har				
The cells and batter	ries 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 Limi		STEP				
	N.A.		N.A.			
Respiratory Protection (Spec						
Ventilation Local Exhau		1	N.A.			
Mechanical	(General) N.A	A. Other	N.A.			
Protective Gloves	N.	A. Eye Protection	N.A.			
Other Protective Clothing or	Equipment N.	A.				



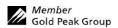
Work / Hygienic Practices

N.A.



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Section 9	- Physical / Chen	nical P	ropert	ies			
Boiling Point		S	pecific (	Gravity (H <sub>2</sub> O=1		NY 4	
Vapor Pressu	N.A.	1	lelting F	Point		N.A.	
v apor 1 iessu	N.A.	IV	iciting i	OIIIt		N.A.	
Vapor Density (AIR=1)			vaporati	on Rate (Butyl			
Solubility in	N.A.					N.A.	
Solubility III	N.A.						
Appearance a	nd Odor		Cylin	drical Shape, o	dorless		
Section 1	0 – Stability and F	Reactiv	rity				
Stability	Unstable			ons to Avoid			
	Stable	X					
Incompatibili	ty (Materials to Avoid)						
Hagandana D	ecomposition or Byprodu						
nazaruous D	ecomposition of Byprodi	icts					
Hazardous Polymerizati on	May Occur		Co	onditions to Av	oid		
	Will Not Occur	X					
Section 1	1 – Toxicological	Inform	ation				
Route(s) of E	ntry Inhalatio	n?	N.A.	Skin?	N.A.	Ingestion?	N.A.
Healtl	h Hazard (Acute and Chr	onic) / To	oxicolog	ical information	1		
In case	e of electrolyte leakage, s	skin will t	e itchy	when contamin	ated with elec	trolyte.	
In con	tact with electrolyte can	cause sev	ere irrita	tion and chemi	cal burns.		
Inhala	tion of electrolyte vapors	may cau	se irritat	ion of the uppe	r respiratory ti	ract and lungs.	
Section 1	2 – Ecological Inf	ormati	on				
	N.A.						
Section 1	3 – Disposal Cons	siderat	ions				
	of batteries according to			ılations.			





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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 Code 36-12	188, 230, 310, 957	
UN	UN 3090, UN 3091	
US DOT	29, A54, A100, A101	
ICAO, IATA 55 <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)
	GPCR2	10	0.27
Cell	GPCR1/3N	2.3	0.06
	GPCR14250	10	0.27
	GPCR123A	16	0.56
	GP15LF	14.5	0.96
Battery	GPCR-P2	37	1.12
	GP2CR5	37	1.12
	GPCR-V9	34	0.81

<sup>\*\*</sup> The battery models meet the UN manual of Tests and Criteria, Part III, Sub-section 38.3 \*\*

# 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.

