# **GP** Batteries

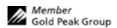
## Material Safety Data Sheet for Photo Lithium battery (Lithium Metal Battery)

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IDENTITY (As Used on Label and List) Photo Lithium battery (Lithium Metal Battery)	Note: Blank spaces are not permitted marked to indicate that.	ed if any item is not applicable or no inform	nation is available, the space must be
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,	Telephone Number for information Within USA and Canada: 1-800-42 Outside USA and Canada: +1 703-5		
Kwai Chung, N.T. H.K.	Date of prepared and revision Feb 23, 2010 Signature of Preparer (optional)		
Section II - Hazardou Hazardous Components: Description:	us Ingredients / Identity  CAS Number		roximate % of total weight
Lead	7439-92-1	<00>	004 Wt%
Mercury	7439-97-6	<0.0	0001 Wt%
Cadmium	7440-43-9	<0.0	001 Wt%
Lithium	7439-93-2	2.7-3	3.3 Wt%
Boiling Point	Chemical Characteristics   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	Cylindri	ical Shape, odorless	
Section IV – Hazard			
Classification N.A.			



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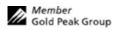
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Section V	- Reactivit	v Data						_
Stability	Unstable		Condition	ns to Avoid				
	Stable	X						
Incompatibility (	Materials to Avoid	1)						
Hazardous Deco	mposition or Bypr	oducts						
Hazardous Polymerization	May Occur		Condition	ns to Avoid				
Forymenzation	Will Not Occur	X						
			-					
	- Health H							
Route(s) of		Inhalation?		Skin?		Ingestion?		
Entry			N.A	١.	N.A.		N.A.	
Health Hazar	d (Acute and C	Chronic) / Toxi	clogical i	nformation				
In case of	of electrolyte leaka	ige, skin will be it	chy when co	ontaminated with elec	trolyte.			
In conta	ct with electrolyte	can cause severe	irritation an	d chemical burns.				
Inhalatio	on of electrolyte va	apors may cause in	ritation of t	he upper respiratory t	ract and lungs.			
								_
Section VI	I – First Aid	d Measures						_
First Aid Prod								
If electro	olyte leakage occu	rs and makes cont	act with ski	in, wash with plenty o	f water immediate	ely.		
If electro	olyte comes into c	ontact with eyes, v	wash with c	opious amounts of wa	ter for fifteen (15	) minutes, and cor	ntact a physician.	
If electro	olyte vapors are in	haled, provide fre	sh air and s	eek medical attention	if respiratory irrit	ation develops. V	entilate the contaminated area.	
Section VI	II - Fire and	d Explosion	Hazar	d Data				
Flash Point (Met	hod Used)	Ignition Temp.		Flammable Limits	LEL		UEL	
	.A.	N.A.		N.A.		N.A.	N.A.	
Extinguishing M								
Carbon	Dioxide, Dry Chei	nical or Foam ext	inguishers					
Special Fire Figh	nting Procedures							
N.A.								
Unusual Fire and	l Explosion Hazaro	ds						
Do not o	dispose of battery i	n fire - may explo	de.					
Do not s	short-circuit batter	y - may cause buri	ns.					





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Document Number: MCRA003W Revision:12 Page 3 of 4 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: STEP 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 Eye Protection N.A. Other Protective Clothing or Equipment 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

All GP lithium Photo batteries (Lithium Metal Battery) comply to the necessary requirements under the UN Manual of Tests and Criteria as referenced in the following transportation regulations:

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

All GP lithium Photo battery (Lithium Metal Battery) packaging comply with Partially regulated DG. section II of PI 968.

Cells & batteries should be packaged in accordance with these transportation regulations. It is especially important to ensure that cells & batteries are packed in such a way to prevent short circuits.

\*\* The commodity is met the UN manual of Tests and Criteria, Part III, Sub-section 38.3 \*\*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 regulatories.

#### 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)	
	GPCR123A	17	0.6	
Cell	GPCR2	12	0.33	
	GPCR1/3N	2.3	0.06	
	GPCR14250	9	0.3	
	GPCR14500	17	0.66	
Battery	GPCR-P2	37	1.14	
	GPCR-V3	38	1.32	
	GP2CR5	40	1.08	
	GPCR-V9	34	0.9	