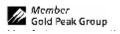


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Note: Blank spaces are not permitted if	any item is not applicable	e or no information i	is available, the	space must be marked to ind	icate that.
Section I- Information of	Manufacturer				
Manufacturer's Name GP Batteries International Ltd.			Emergency Telephone Number		
Address (Number, Street, City, State, and ZIP Code)			Telephone Number for information		
8/F GP Building, 30 Kwai Wing Road, Kwai Chung, N.T. H.K.			852-2484-3333 Date of prepared and revision		
				November 30, 2010 Preparer (optional)	<u> </u>
				· r · · · · · · · · · · · · · · · · · ·	
Section II - Hazardous Ing Hazardous Components	<u>gredients/ldent</u>	ity Information	on		
Description:	CAS#	EINECS N	NO.	Approximate % of total w	veight
Manganese dioxide	1313-13-9	215-202-6	5	<36 Wt%	
Zinc	7440-66-6	231-175-3	3	<13 Wt %	
Mercury	7439-97-6	231-106-7	7	<0.58 Wt %	
Lead	7439-92-1	231-106-7	7	<0.0066 Wt %	
Cadmium	7440-43-9	231-152-8	3	0	
Sodium hydroxide and potassium hydroxide mixture, 30-35% solution	\	\		<16 Wt%	
Cr+6	\	\		0	
PBB	\	\		0	
PBDE	\	\		0	
Phthalate	\	\		0	
Others	\	\		<51 Wt%	
		<u>.</u>		•	
Section III - Physical/Che	emical Characte	eristics			
Form		Specific (Specific Gravity (H2O =1)		
N.A. Boiling Point		Melting P	N.A. Melting Point		
N.A. Vapor Pressure (mm Hg)		Evaporat	Evaporation Rate		
N.A.		(Buty1 Ac	(Buty1 Acetate=1) N.A.		
Vapor Density (AIR=1) N.A.		рН	pH N.A.		
Solubility in Water N.A.		Appearar	Appearance and Odor N.A.		
Section IV-Hazard Classific	cation				
N.A.					
Section V – Reactivity Data	a				
Stability Yes= (X)	Unstable	Condition	ns to Avoid		
100 (A)	Stable				
	(X)				
Incompatibility (Materials to Avoid)					
Hazardous Decomposition or By pr When heated, batte		azardoue v	vanour of	KUH / NaUH an	nd Ha
Hazardous May Occ		Conditions to Avo		KOH / NAOH AN	ій пу
Reactions	()				





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Yes = (X)	Will Not Occur (X)			
Section VI – Healt	th Hazard Data			
Route(s) of Entry Yes = (X)) Inhalation? (N.A.)	Skin? (N.A.)	Ingestion? (N.A.)	
Health Hazard (Acute	and Chronic) / Toxicologica	l in formation		
In case of electrolyte leak	rage, skin will be itchy when contant	ninated with electrolyte.		
In contact with electrolyte	e can cause severe irritation and che	mical burns.		
Inhalation of electrolyte v	vapors may cause irritation of the up	per respiratory tract and lungs.		
Section VII – First	t Aid Measures			
Firs aid Procedures	Titu Mensules			
If electrolyte leakage occ	urs and makes contact with skin, wa	sh with plenty of water immedia	tely.	
If electrolyte comes into o	contact with eyes, wash with copiou	s amounts of water for fifteen m	inutes, and contact a physic	ian.
If electrolyte vapors are in	nhaled, provide fresh air and seek m	edical attention if respiratory irr	tation develops. Ventilate t	the contaminated area.
Section VIII – Fire	e and Explosion Hazar	d Data		
Flash Point (Method Used)	Ignition temp. Flam N.A. N.A.	nmable Limits LE.	L N.A.	UEL N.A.
Extinguishing Media	Carbon Dioxide, Dry Chemical or F	oam extinguishers		
Special Fire Fighting Proceed		oum entinguisites		
Unusual Fire and Explosion				
Do not dispose of battery	in fire – may explode.			
Do not short – circuit batt	tery – may cause burns.			
Section IX – Accid	dental Release or Spilla	age		
Steps to Be Taken in C	Case Material is Released or S	Spilled		
Batteries that are leaking	should be handled with rubber glove	es.		
Avoid direct contact with	electrolyte.			
Wear protective clothing	and a positive pressure Self-Contain	ned Breathing Apparatus (SCBA).	
Section X – Hand	ing and Storage			
Safe handing and stora	age advice			
Batteries should be	handled and stored carefully to avo	id short circuits.		
Do not store in disc	orderly fashion, or allow metal object	ets to be mixed with stored batter	ies.	
Never disassemble	a battery.			
Do not breathe cell	vapors or touch internal material wi	ith bare hands.		
Keep batteries betw	veen -30°C and 35°C for prolong sto	orage.		





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Section XI – Exposur	e Controls / Persona	al Protection	
Occupational Exposure Limits:	LTEP	STEP	
	N.A.	N.A.	
Respiratory Protection (Specify Ty	rpe) N.A.		
Local Exhausts	11,71	Special	
Ventilation Local Exhausts	N.A.	N.A.	
Mechanical (gen		Other	
	N.A.	N.A.	
Protective Gloves		Eye Protection	
	N.A.	N.A.	
Other Protective Clothing or Equip			
	N.A.		
Work / Hygienic Practices			
	N.A.		
Section XII – Ecologi	cal Information		
	N.A.		
Section XIII – Dispos	al Method		
Dispose of batteries according	to government regulations.		_

Section XIV – Transportation Information

GP batteries are considered to be "Dry cell" batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) and International Maritime Dangerous Goods Regulations (IMDG). The only DOT requirement for shipping these batteries is special provision 130 which states: "Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals). The only requirements for shipping these batteries by ICAO and IATA is Special Provision A123 which states: "An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transportation." The international Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says: Batteries, dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits. Example of such batteries is: alkali-manganese, zinc-carbon, and nickel metal hydride and nickel-cadmium batteries.

Non-dangerous goods.

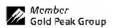
Such battery has been packed in inner packaging in such a manner as to effectively prevent short circuit and movement that could lead to short circuit.

Section XV – Regulatory Information

Special requirement be according to the local regulatory.

Section XVI - Other Information

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





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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.

Model No.	IEC
A76	LR44
A76P	LR44
162	LR58
164	LR621
171	LR69
177	LR626SW
186	LR1142
189	LR54
189E	LR54
191	LR1120
192	LR41
PX625A	LR9
10A	\
11A	\
23A	\
23AE	\
29A	\
26A	\
27A	\
476A	4LR44
220A	10F15