## Material Safety Data Sheet

Product Name : 9V Alkaline Battery Document Number: RPKS0112

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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 information is available, the space must be marked to indicate that.			
Section I – Information of Manufacturer				
Manufacturer's Name GPB(M) Sdn. Bhd.	Emergency Telephone Number			
Address (Number, Street, City State, and ZIP Code) No.5, Jalan Tampoi 7,	Telephone Number for information 07-3300033			
Kawasan Perindustrian Tampoi, Johor Bahru, Malaysia	Date of prepared and revision 10 <sup>th</sup> January 2018			
	Signature of Preparer (optional)			

## Section II - Hazardous Ingredients / Identity Information

Hazardous Components:							
Description:		Approximate %	of total weight	Remarks			
Mercury (Hg)	:	< 1	ppm	Impurity or non-added content			
Lead (Pb)	:	< 25	ppm	Impurity or non-added content			
Cadmium (Cd)	:	< 3	ppm	Impurity or non-added content			
Hexavalent Chromium (Cr <sup>6+</sup> )	:	< 3	ppm	Impurity or non-added content			
Polybrominated Biphenyls (PBBs)	:	N/A					
Polybrominated Diphenyl Ethers (PBDEs)	:	N/A					
MnO2	:	29	%				
Zn	:	10	%				
KOH (40%)	:	15	%				

Section III - Physical / Chemical Characteristics				
Boiling Point	Boiling Point Specific Gravity (H <sub>2</sub> O=1) N.A.			
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 N.A.				

## Section IV – Hazard Identification

GHS Classification : N/A Signal Word : N/A Hazard Classification : N/A Pictogram : N/A Under normal condition of use, the battery is hermetically sealed

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Ingestion? (N.A.)

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## Section V – Reactivity Data

Stability	Unstable	Conditions to Avoid
	()	
	Stable	Do not heat, crush, disassemble, short circuit or recharge.
	(x)	
Hazardous	May Occur	Conditions to Avoid
Reactions	()	N/A
Yes = (X)		
	Will Not Occur	
	(X)	

Skin?

(N.A.)

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### Section VI - Health Hazard Data Route(s) of Entry Inhalation?

(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 VII – 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.

#### Section VIII - Fire and Explosion Hazard Data Flash Point (Method Used) UEL Ignition Temp. Flammable Limits LEL N.A. N.A N.A. N.A. N.A. Extinguishing Media As appropriate for surrounding area. 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.

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	X – Accidental Release or Spill		
Steps to Be	Taken in Case Material is Released or Sp	villed	
Batteries th	at are leakage should be handled with rub	ber gloves.	
Avoid direc	et contact with electrolyte.		
Wear protect	ctive clothing and a positive pressure Self	Contained Breathing Apparatus (SCBA).	
Section 2	X – Handling and Storage		
	ng and storage advice		
Batteries sh	ould be handled and stored carefully to a	void short circuits.	
Do not stor	e in disorderly fashion, or allow metal ob	jects to be mixed with stored batteries.	
Never disas	ssemble a battery.		
Do not mix	battery system in same equipment.		
Do not brea	the cell vapors or touch internal material	with bare hands.	
Keep batter	ies at cool and dry storage condition.		
	XI – Exposure Controls / Persor	n Protection	
Occupational	Exposure Limits: LTEP	STEP	
	N.A.	N.A.	
Respiratory Pr	rotection (Specify Type)		
	N.A.		
Ventilation	Local Exhausts	Special	
	N.A.	N.A.	
	Mechanical (General)	Other	
	N.A.	N.A.	
Protective Glo	N.A.	Eye Protection N.A.	
Other Protecti	ve Clothing or Equipment N.A.	I	
Work / Hygier	hic Practices N.A.		
Section 2	XII – Ecological Information		
N.A.			
	XIII – Disposal Method		
Dispose of ba	atteries according to government regulations.		



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## 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) 59th edition Special Provision A123 (Rev. 2017) 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). IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting.

## 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.



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