Issue Date: 2014-09-11

Police Share have a mercial police

## MATERIAL SAFETY DATA SHEET

For Rechargeable Polymer Li- lon Battery MLP581730 of McNaic

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### PRODUCT IDENTIFICATION

McNair Polymer Lithium Ion Battery

McNair MLP581730 230mAh 3.7V Polymer Li-ion Battery

(Equivalent Lithium content: 0.069g and 0.851Wh/battery pack).

The UN classification number: Class 9

UN Number: UN3480 lithium ion batteries or

UN3481 lithium ion batteries packed with equipment or lithium ion batteries

contained in equipment

### MANUFACTURER

McNair New Power Co., Ltd.

McNair Industrial Estate, 1888 West of Meijing Road Dalang Town, Dongguan City,

Guangdong Province, China.

Tel: (+86)769 83197555, Fax: (+86)769 83195372

24 Emergency contact phone number: (+86) 769 83197555 Email: pub@mcnair.com.cn, Web site: www.mcnair.com.cn

#### 2. COMPOSITION INFORMATION

HAZARDOUS INGREDIENTS	%	CAS NUMBER
Aluminum Foil	2-10	7429-90-5
Metal Oxide (proprietary)	20-50	sees Guy.
Polyvinylidene Fluoride (PVDF)	<5	24937-79-8
Styrene Butadiene Rubber(SBR)	<5	9003-55-8
Copper Foil	2-10	7440-50-8
Carbon (proprietary)	10-30	~440-44 <b>-</b> 0
Electrolyte (proprietary)	10-20	
Aluminum can, Steel ,Nickel and inert materials	Remainder	N/A

## 3. HAZARDS IDENTIFICATION

## **Emergency Overview**

May explode in a fire, which could release hydrogen fluoride gas and smoke.

Use extinguishing media suitable for materials burning in fire

## PRIMARY ROUTES OF ENTRY

Skin contact, Skin absorption, Eye contact, Inhalation, and Ingestion: NO

	Skin contact	No
	Skin absorption	No
	Eye contact	No
	Inhalation	No.
Arrest en	Ingestion	No.

## SIGNS AND SYMPTOMS OF EXPOSURE

	Skin contact	No effect under routine handling and use
	Skin absorption	No effect under routine handling and use
	Eye contact	No effect under routine handling and use
	Inhalation	No effect under routine handling and use
	Ingestion	No effect under routine handling and use
No.	Reported as Carcinogen	Not applicable

## 4. EMERGENCY AND FIRST AID MEASURES

INHALATION, EYE CONTACT, and SKIN CONTACT: Not a health hazard.

### INGESTION

If swallowed, obtain medical attention immediately.

### CAUTION

If exposure to internal materials within cell due to damaged outer casing, the following actions are recommended.

### INHALATION

Leave area immediately and seek medical attention.

### **EYE CONTACT**

Rinse eyes with water for 15 minutes and seek medical attention.

### SKIN CONTACT

Wash area thoroughly with soap and water and seek medical attention.

### **INGESTION**

Drink milk/water and induce vomiting; seek medical attention

## 5. FIRE FIGHTING MEASURES

#### **GENERAL HAZARD**

Cell is not flammable but internal organic material will burn if the cell is incinerated. Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

#### **EXTINGUISHING MEDIA**

Use extinguishing media suitable for the materials that are burning.

### SPECIAL FIREFIGHTING INSTRUCTIONS

If possible, remove cell(s) from fire fighting area. If heated above 130°C, cell(s) may Swell/explode/vent.

If package is damage or heat, the package should be checked and repackaged well.

### FIREFIGHTING EQUIPMENT

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### ON LAND

Place material into suitable containers and call local fire/police department.

#### IN WATER

If possible, remove from water and call local fire/police department.

### 7. HANDLING AND STORAGE

### HANDLING

No special protective clothing required for handling individual cells.

#### STORAGE

Store in a cool, dry place

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### **ENGINEERING CONTROLS**

Keep away from heat and open flame. Store in a cool dry place

## PERSONAL PROTECTION

Respirator:

Not required during normal operations, SCBA required in the event of a fire

Eye/face protection:

Not required beyond safety practices of employer.

Gloves:

Not required for handling of cells.

Foot protection:

Steel toed shoes recommended for large container handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

State	Solid
Odor	N/A
PH	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

### 10. STABILITY AND REACTIVITY

### REACTIVITY

None during normal operating or handling conditions.

### **INCOMPATIBILITIES**

None (during normal operation). Avoid exposure to heat, open flame, and corrosives

### HAZARDOUS DECOMPOSITION PRODUCTS

None (during normal operating conditions). If cells are opened, hydrogen fluoride and carbon monoxide may be released.

## **CONDITIONS TO AVOID**

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

### 11. TOXICOLOGICAL INFORMATION

This product does not elicit toxicological properties during routine handling and use.

For income of a

THE PROPERTY CONTRACTOR CONTRACTO	No
Sensitization	No
Sensitization Acute toxicity Teratogenicity Reproductive toxicity	No
Teratogenicity	No
Reproductive toxicity 7 7 7 7	

This product does not contain any kinds of the following substances and halogen-type flame retardants including Chlorine and Bromide type harmful flame retardants which are listed in appendix of TCO documents and relevant international ECO requirements.

Polybromated Biphenyls	(PBB)
Polybromated Diphonyl Ethers	(PBBE)
Polybromated Biphenyl Ethers	(PBBO)
Polybromated Biphenyl Oxides	(PBDE)
Polybromated Diphenylethers	(PCB)
Polychlorinated Biphenyl	(PCDE)
Polychlorinated Diphenylethers	(TBBPA)
Tetrabromphisphenol A	(10017)
Asbestos, Antimonytrioxide, Dioxine	

None of the following substances will be exposed, leaked, or emitted during transportation, storage or any operation and any temperature condition:

Chlorinated Fluorohydrocarbon (FCKW)

Acrylonitride

Styrol

Phenol

Benzol

Mercury of greater than 0.0001 wt% for alkaline battery Mercury of greater than 0.0005 wt% for other battery Polymer content of greater than 0.5g/cell, 1.5g/battery Cadmium, lead, and other harmful heavy metal

This product does not contain mercury, cadmium and Polymer-metal.

Mercury content	N/A
Polymer-metal	N/A
Cadmium content	N/A

### CAUTION

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers

## 12. ECOLOGICAL INFORMATION

Some materials within the cell are bio-accumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

13. DISPOSAL CONSIDERATIONS
CALIFORNIA REGULATED DEBRIS 章

RCRA Waste Code: Non-regulated

Dispose of according to all federal, state, and local regulations.

### 14. REGULATORY INFORMATION

OSHA hazard communication standard (29 CFR 1910.1200)

□ Hazardous

■ Non-hazardous

### 15. TRANSPORT INFORMATION

Polymer lithium ion batteries containing no more than 20Wh/cell and 100 Wh /battery pack can betreated as "Non-dangerous goods" under the United Nations Recommendations on the Transport of Dangerous Goods, Special Provision 188, if packaging is strong ,suitable, limited weight ,and prevent the products from short-circuit. Also concerned mark or label should be appeared on each outer box.

With regard to air transport, the following regulations are cited and considered:

- I) The International Civil Aviation Organization (ICAO) Technical Instructions (2013-2014 Edition)
- II) The International Air Transport Association (IATA) Dangerous Goods Regulations (55th Edition), Section II of PI967: lithium ion batteries contained in equipment.
- Or Section II of PI966: Polymer lithium ion batteries packed with equipment; it is a section II of PI966: Polymer lithium ion batteries packed with equipment;
- Or Section II of PI965: Polymer lithium ion batteries (if >2pcs/carton, it meets Section IB of PI965); III) The International Maritime Dangerous Goods (IMDG) Code (2012 Edition) with SP188; IV) The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA (Part 49 CFR Sections 100-185),
- V) The Office of Hazardous Materials Safety within the US Department of Transportation's (DOT) Research and Special Programs Administration (RSPA), and
- VI) The UN Recommendations on the Transport of Dangerous Goods Model Regulations and the Manual of Tests and Criteria (UN38.3)

Our products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and

national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1~T8) on the Transport of Dangerous Goods Model Regulations.

	11 /	- 3		
Manual of Test and Criteria (38.3 Polymer Lithium ion battery)				
	Test Item	Test Results	Remark	
T1	Altitude Simulation	Pass		
T2	Thermal Test	Pass		
Т3	Vibration	Pass		
T4	Shock	Pass		
T5	External Short Circuit	Pass		
Т6	Impact	Pass		
T7	Overcharge	Pass	For Pack Only	
Т8	Forced Discharge	Pass	For Cell Only	

### 16. OTHER INFORMATION

For further information, please contact McNair New Power Co., Ltd. sales representative. Contact phone number: (+86)769-3197555

#### Note:

This Sheet is provided as technical information only. The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. McNair New Power Co. Ltd. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it except normal transport according to the correct transport condition.

## Safety Data Sheet for Nickel Metal Hydride Battery

Document Number: RRS0541

Revision: 23

Date of prepared: 01/Jan/2017

## Section I – Product and Company Identification Information of Product 產品信息 Product Identity (used on the label) Nickel Metal Hydride Battery 產品標識 (用於標籤) 金屬氫化物鎳電池 Information of Manufacturer 製造商信息 Manufacturer's Name 製造商名字 Emergency Telephone Number 緊急聯繫電話 GPI International Ltd. Within USA & Canada call 美國與加拿大境內: +1-800-424-GPI 國際有限公司 Outside USA and Canada call 美國與加拿大境外: +1-703-527-3887 Address (Number, Street, City State, and ZIP Code) Telephone Number for Information: 諮詢電話 聯繫地址: +852-24843333 7/F, Building 16W, 16 Science Park West Avenue Hong Kong Science Park, New Territories, Hong

Recommended use of chemicals: 化學物品的建議使用

N.A.

Kong

## Section II - Hazards Identification 危害識別

GHS Classification: N.A. GHS 分類(全球化學品統一分類和標籤制度)

Under normal conditions of use, the battery is hermetically sealed. If the electrolyte is leaked, hazardous material may be released. 在正常情況下使用,電池是密封的。但是如果電解液有洩露時,就會出現危害物質

01/Jan/2017

### Human Health Effects 人身健康影響

香港新界香港科學園16號樓7層

Inhalation

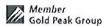
The electrolyte inhalation can cause respiratory irritation. It could be possibly carcinogen.

Date of prepared and revised:修訂日期

吸入

吸入電解液會導致呼吸過敏並且有可能致癌

Remark: "N.A." is indicated if not applicable.



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## Safety Data Sheet for Nickel Metal Hydride Battery

**Document Number: RRS0541** 

Revision: 23

Date of prepared: 01/Jan/2017

Skin contact	The electrolyte can cause skin irritation, chemical burns. Nickel compounds, cobalt and	
皮膚接觸	cobalt compounds can cause skin sensitization and an allergic contact dermatitis.	
	與電解液發生皮膚接觸會導致皮膚刺激與化學燒傷。電池中的含鎳物質以及含鈷物質	
	會刺激皮膚從而導致皮膚過敏,並且可能導致皮膚炎症	
Eye contact	The electrolyte leaked from the battery cell is strong alkali, can cause severe irritation and	
眼睛接觸	chemical burns.	
	從電池洩露出的電解液具有強鹼性,可以導致嚴重刺激以及化學燒傷	
Ingestion	If the battery is swallowed and opened, or the electrolyte is ingested, the electrolyte	
吞人	irritates the mouth and the throat seriously, may lead to vomiting, nausea, hematemesis,	
	stomach pains and diarrhea.	
	如果電池被誤吞下並且電池呈暴露狀態,或者電解液被誤服下,電解液會刺激其嘴與	
	喉嚨,可能會造成嘔吐、暈眩、吐血、胃疼以及腹瀉。	

## Environmental Effects 環境影響

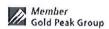
The battery cell remains in the environment. Do not throw it out into the environment.

電池可存在自然界中對環境無污染,但是不能直接丟棄

### Specific Hazards 特定危害

As previously described.

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Safety Data Sheet for Nickel Metal Hydride Battery

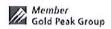
Document Number: RRS0541

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Date of prepared: 01/Jan/2017

## Section III - Composition/Information on Ingredients

Chemical Name/Common Name	CAS No. CAS 號碼	%/wt 含量
物質名稱		(品質分數 wt%)
Aluminum 鋁	7429-90-5	< 2
Cobalt metal 金屬鈷	7440-48-4	2.5-6.0
Cobalt oxide 氧化鈷	1307-96-6	
Cobalt hydroxide 氫氧化鈷	21041-93-0	-
Lithium Hydroxide 氫氧化鋰	1310-65-2	0-4
Manganese 錳	7439-96-5	0-4
Lanthanum 鑭	7439-91-0	<13
Cerium 鈰	7440-45-1	-
Neodymium 釹	7440-00-8	
Praseodymium 鐠	7440-10-0	
Nickel hydroxide 氫氧化鎳	12054-48-7	35-55
Nickel oxide 氧化鎳	1313-99-1	
Nickel powder 金屬鎳粉	7440-02-0	
Potassium Hydroxide 氫氧化鉀	1310-58-3	<7
Sodium Hydroxide 氫氧化鈉	1310-73-2	0-4
Zinc metal 金屬鋅	7440-66-6	<3
Zinc oxide 氧化鋅	1314-13-2	
Zinc hydroxide 氫氧化鋅	20427-58-1	
ron 鐵	7439-89-6	10-25
Other Non-hazardous 其他無害物質	Water, Paper, Plastic and Other	Balance





Safety Data Sheet for Nickel Metal Hydride Battery

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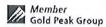
Date of prepared: 01/Jan/2017

## Section IV - First-aid Measures 急救措施

Inhalation	If electrolyte leakage occurs, cover the victim in a blanket, move to the place of fresh air and	
吸入	keep quiet. Seek medical attention immediately. When dyspnea (breathing difficulty) or	
	asphyxia (breath-hold), give artificial respiration immediately.	
	如果發生電解液洩露並且傷患吸入一定量的電解液,給受傷者鋪上毛毯,並將傷患移	
	到新鮮空氣處。立即尋找醫療救護,當傷患出現呼吸困難或者呼吸停止時,立即給予	
	人工呼吸幫助。	
Skin Contact	If electrolyte leakage occurs, remove contaminated clothes and shoes immediately. Wash	
皮膚接觸	the adherence or contact region with soap and plenty of water. Seek medical attention	
	immediately.	
	如果發生電解液洩露並與傷患皮膚接觸,立即移除粘有電解液的衣物,用大量的水沖	
	洗且附著物和接觸部分,並立即尋求醫療救護。	
Eye Contact	If electrolyte leakage occurs, immediately flush eyes with water continuously for at least 15	
眼睛接觸	minutes. Seek medical attention immediately.	
	如果發生電解液洩露並且接觸到傷患的眼睛,立即用大量的水不停地沖洗眼睛 15 分	
	鐘,並尋求醫療救護	
Ingestion	If battery cell and electrolyte is ingested, do not induce vomiting or give food or drink. Seek	
吞入	medical attention immediately.	
	如果電池或電解液被誤服,不要催吐或者給予食物或飲料,要立即尋求醫療救護。	

Section V – Fire-fighting Measures 消防措施		
Extinguishing Media	Dry sand, chemical powder fire extinguishing medium.	
滅火介質	幹砂,化學品滅火劑	
Unusual Fire and Explosion Hazards	Acrid or harmful fume is emitted during fire.	
非尋常火源和爆炸危害	會有刺激性或者有害氣體在火災過程產生	

Remark: "N.A." is indicated if not applicable.



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Safety Data Sheet for Nickel Metal Hydride Battery

Document Number: RRS0541

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Revision: 23

Date of prepared: 01/Jan/2017

Special Protective equipment and Precautions for fire-fighters 對於消防員的特別的保護措施和提

Fire fighters should wear self-contained breathing apparatus. Burning nickel metal hydride batteries can produce toxic fumes including oxides of nickel, cobalt, aluminum, manganese, lanthanum, cerium, neodymium, and praseodymium.

消防員應穿戴獨立的呼吸設備,而發生燃燒的鎳氫電池會產生含有鎳、 鈷、鋁、錳、鑭、鈰、釹、鐠等氧化物的有毒煙霧,

Protective equipment written in Section VIII.

防護設備詳見第八部分

Section VI – Accidental R	elease Measures 意外釋放的措施			
Personal Precautions	Forbid unauthorized person to enter. Remove leaked materials with			
個人防護	protective equipment written in Section VIII.			
	禁止非授權人員進入洩露現場,處理洩露材料的防護措施詳見第八部分			
Environmental precautions	Do not throw out into the environment.			
環境防護	不能直接丟棄在環境中			
Containment and Clean Up	Dilute the leaked electrolyte with water and neutralize with diluted sulfuric			
污染物的清理	acid. The leaked solid is moved to a container. The leaked place is fully			
	flushed with water.			
	用水稀釋洩露的電解液,再用稀硫酸中和。洩露的固體要移至專用的容			
	器中,洩露污染的低於要用水沖洗。			

## Section VII - Handling and Storage

Handling

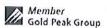
Prevention of user exposure: Not necessary under normal use.

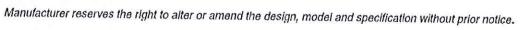
處理

使用者的防護措施:在正常使用下不需要

Prevention of fire and explosion: Not necessary under normal use.

火災以及爆炸的防護措施:在正常使用下部需要







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Precaution for safe handling: Do not damage or remove the external tube.

處理時的安全提醒:不要破壞和移動外部的管道設備

Specific safe handling advice: Never throw out cells in a fire or expose to high temperatures. Do not soak cells in water and seawater. Do not expose to strong oxidizers. Do not give a strong mechanical shock or throw down. Never disassemble, modify or deform. Do not connect the positive terminal to the negative terminal with electrically conductive material. In the case of charging, use only dedicated charger or charge according to the conditions specified by GP Batteries.

特別的安全處理建議:不要將電池投入在明火以及高溫中。不要將電池浸泡在水或者海水中。不 要將電池暴露在強氧化性的環境中。不要對電池進行高強度的機械碰撞或者投擲,不要對電池經 行解剖彎曲變形。不要短接正負極,充電時,只是用由 GP 所提供的充電器或者充電方法

## Storage 儲存

Storage conditions (suitable to be avoided): Avoid direct sunlight, high temperature, high humidity. The cells and batteries shall not be stored in high temperature, the maximum temperature allowed is  $60^{\circ}$ C for a short period during the shipment. Otherwise the cells maybe leakage and can result in shortened cycle life.

存儲條件:避免直接的日曬、高溫、高濕度。電池不能存儲在高溫環境中,在短期運輸過程中,最高溫度為60攝氏度,如果違反儲存建議,電池有可能出現漏泄情況並導致循環壽命減少 Incompatible products: Conductive materials, water, seawater, strong oxidizers and strong acids Packing material (recommended, not suitable): insulated and tear-proof materials are recommended.

不能一起儲存的產品:導電材料、水、海水、強氧化劑、強酸

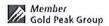
包裝所用材料(建議):絕緣並且防撕裂的材料

## Section VIII - Exposure Controls/Personal Protection 暴露控制和人身保護

Engineering Control 工程控制

No engineering measure is necessary during normal use. If internal cell materials are leaked, the information below will be useful.

在正常使用情況下不需要工程控制手段。如果電池內部材料洩露,以下資訊可提供參考。





## Safety Data Sheet for Nickel Metal Hydride Battery

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### Exposure Control Limit 暴露控制界限

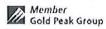
Common Chemical Name /	OSHA PEL	ACGIH TLV		
General Name				
化學物質名稱				
Aluminum metal (as Al)	TWA 15 mg/m³ (total)	· · · ·		
金屬鋁	TWA 5 mg/m³ (resp)			
Cobalt metal (As Co)	TWA 0.1 mg/m <sup>3</sup>	TWA 0.02 mg/m <sup>3</sup>		
金屬鈷	-			
Lithium Hydroxide	•			
氫氧化鋰				
Manganese compounds	(Celling) 5 mg/m <sup>3</sup>	TWA 0.02 mg/m³ (resp.)		
(as Mn) 錳化物				
Nickel, metal and insoluble	(as Ni) TWA 1 mg/m <sup>3</sup>	Elemental 元素含量: 1.5mg/m³		
compounds		(IHL);		
鎳(金屬以及不容物)		Insoluble inorganic compounds		
		不溶有機物: 0.2mg/m³ (IHL)		
Potassium Hydroxide	-	=		
氫氧化鉀				
Sodium Hydroxide	2 mg/m³ TWA	(Celling) 2 mg/m <sup>3</sup>		
氫氧化鈉				
Zinc oxide	Respirable fraction:呼吸閥值	Respirable fraction: 呼吸閥值		
鋅化物	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>		

TWA-Time Weighted Average 時間加權平均值

ACGIH TLV: American Conference of Governmental Industrial Hygienists Threshold Limit Value 美國政府工業衛生學家會議所提供暴露閥值

OSHA PEL: Occupational Safety & Health Administration Permissible Exposure Limit 職業安全和健康署所允許暴露閥值

Remark: "N.A." is indicated if not applicable.



INTERNATIONAL STREET

Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.

## Safety Data Sheet for Nickel Metal Hydride Battery

Document Number: RRS0541

Revision: 23

Date of prepared: 01/Jan/2017

## Personal protective equipment 個人防護設備

Respiratory protection: Protective mask 呼吸設備: 防護面罩

Hand protection: Protective gloves 手防護:防護手套

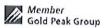
Eye protection: Protective glasses designed to protect against liquid splashes

眼睛防護:防止液體飛濺的防護眼鏡

Skin and body protection: Working clothes with long sleeve and long trousers

皮膚及身體防護:長袖長褲的工作服

Section IX – Physical and Chemical	Properties 物理與化學性質			
Appearance 外觀	Odor 氣味			
Solid, Cylindrical Shape, Metallic color	Odorless 無			
固體、圓柱形、金屬顏色	Odor Threshold 氣味閥值 N.A.			
Нα	Melting point/freezing point 熔點/凝固點			
N.A.	N.A.			
Initial boiling point and boiling range	Flash point 閃點			
開始沸騰溫度點與沸騰溫度範圍	N.A.			
N.A.				
Evaporation rate 蒸發率	Flammability (solid, gas) 可燃性(固體、氣體)			
N.A.	N.A.			
	Upper/lower flammability or explosive limit			
	可燃上限與下限以及爆炸極限			
	N.A.			
Vapor pressure 蒸汽壓	Vapor density 氣體密度			
N.A.	N.A.			
Relative density 相對密度	Solubility 溶解度			





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N.A.	Insoluble in water 不溶于水中			
Partition coefficient: n-octanol/water 分配係數	Auto-ignition temperature 自燃溫度			
(正辛醇/水)	N.A.			
N.A.	114			
Decomposition temperature 分解溫度	Viscosity 粘度			
N.A.	N.A.			

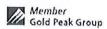
Section X – Stability and Reactivity				
Stability 穩定性	Stable under normal use 在正常使用中穩定			
Possibility of hazardous reactions	By misuse of a battery cell or the like, oxygen or hydrogen accumulates in the			
可能存在的危險反應	cell and the internal pressure rises. These gases may be emitted through the			
	gas release vent. When fire is near, these gases may take fire.			
	When a battery cell is heated strongly by the surrounding fire, acrid or			
	harmful fume may be emitted.			
	如果不正當使用電池時,會導致氧氣和氫氣在電池內部聚集從而導致內			
	壓上升,氣體會通過氣壓閥釋放出來,當此次有明火靠近時,會引起氣			
	體燃燒。當電池被加熱劇烈時,會導致刺激性和有害的氣體釋放			
Conditions to avoid	Direct sunlight, high temperature and high humidity			
需避免的情況	直接日曬、高溫、高濕度			
Materials to avoid	Conductive materials, water, seawater, strong oxidizers and strong acids			
需避免的材料	導電材料、水、海水、強氧化劑、強酸			
Hazardous decomposition products	Acrid or harmful fume is emitted during fire.			
分解時的有害產物	在燃燒中會產生有刺激性的有害氣體			

## Section XI - Toxicological Information 毒理學信息

There is no toxicity data for Nickel Metal Hydride Battery. Under normal conditions of use, the battery is non-toxic.

沒有關於鎳氫電池的毒理學資訊,在正常使用條件下,電池是無毒的。

Remark: "N.A." is indicated if not applicable.



Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.



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## Section XII - Ecological Information 生態學信息

Persistence/degradability:可持續性和可降解性:

Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment. 由於電池以及內部材料仍然保留在環境中,不要丟棄以及埋藏電池與大自然中

## Section XIII - Disposal Considerations 處理方法

Recommended methods for safe and environmentally preferred disposal:建議使用的對環境友好的處理方法

Product (waste from residues) 產品 (殘留廢棄物)

Do not throw out a used battery cell. Recycle it through the recycling company.

不要丟棄已使用過的電池,應將其給相應的回收公司

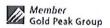
## Contaminated packaging 有污染的包裝

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates them, dispose them as industrial wastes subject to special control.

在正常使用下不會出現包裝以及放置容器出現被污染的情況。當電池內部的材料洩漏時並污染其包裝容器,可將被污染的包裝容器按特定的工業廢物處理

## Section XIV - Transport Information 運輸資訊

Regulatory Body 條例主題	Special Provisions 特定條例		
ADR	295 – 304, 598		
IMO	UN 3496 SP117 and SP963		
UN	UN 3496		
US DOT	49 CFR 172, 102 Provision 130		
IATA	A199		





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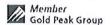
Form of	UN No.	UN Proper	Transport	Packing	Environmental	Guidance	Special
Transportation		Shipping Name	Hazard Class	Group	Hazards 環境	Transport in	Precaution
運輸方式		UN 運輸名稱	運輸危害等	Number	危害	bulk 運輸指	特別提示
			級	包裝組別號		引	
				碼			
Sea	3496	BATTERIES,	9	-	No	According to	SP117 &
海運		NICKEL-METAL				ANNEX II of	SP963
	-	HYDRIDE				MARPOL	
-		-	_			73/78 and the	
						IBC Code	

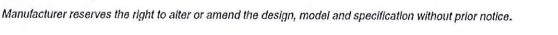
a) In general, all batteries in all forms of transportation (ground, air, or ocean) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in "strong outer packaging" that prevents spillage of contents. All original packaging for GP nickel metal hydride batteries has been designed to be compliant with these regulatory concerns.

一般來講,所有電池在所有運輸過程中(海陸空運輸)都必須安全地包裝。出於安全管理的考慮,安全包裝必須避免電池的短路問題以嚴重外露的問題,這是保證避免電池以及電池內部的材料洩露。所有的 GP 鎳氫電池均會遵守其管理規定來進行包裝。

GP nickel metal hydride batteries (sometimes referred to as "Dry cell" batteries) are not defined as dangerous goods under the IATA Dangerous Goods Regulations 58<sup>th</sup> edition 2017, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations as they are compliant with the requirements contained in the following special provisions.

在國際空運協會(IATA)危險貨物條例第 58 條(2017 版本)、國際民航管理局(ICAO)的技術條例以及美國 危險化學品管理條例(49CFR)的規定當中 GP 鎳氫電池(也被稱作"乾電池")是不作為危險貨物。電池 也只有在遵守相關的特定規定情況下才能不列入危險貨品中。







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In addition, the IATA Dangerous Goods Regulations and ICAO Technical Instructions require the words "not restricted" and the Special Provision number A199 be provided on the air waybill, when an air waybill is issued. 除此之外,國際空運協會(IATA)危險貨物條例和國際民航管理局(ICAO)的技術條例均要求"不作限制",同時要注意針對特別條例 A199(美國運輸局),需要在運貨單中進行說明

b) International Maritime Organization (IMO) IMDG Code regulated these products as UN 3496 BATTERIES, NICKEL METAL HYDRIDE, class 9 dangerous goods with Special Provision 117 and 963 assigned 國際海事組織:國際海運危險品法規其產品號碼為:UN 3496 BATTERIES, NICKEL METAL HYDRIDE,在特殊條例 117 和 963 中為第九級危險物品

#### **SP117**

Only regulated when transported by sea.

#### SP963

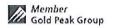
Nickel-metal hydride button cells or nickel-metal hydride cells or batteries packed with or contained in equipment are not subject to the provisions of this Code.

在設備中的鎳氫紐扣電池、鎳氫電池或者電池組不受此特殊條例管理

All other nickel-metal hydride cells or batteries shall be securely packed and protected from short circuit. They are not subject to other provisions of this Code provided that they are loaded in a cargo transport unit in a total quantity of less than 100 Kg gross mass. When loaded in a cargo transport unit in a total quantity of 100 Kg gross mass or more, they are not subject to other provisions of this Code except those of 5.4.1, 5.4.3 and column (16) of the dangerous good list in Chapter 3.2.

其他的鎳氫電池應該安全地包裝以免發生短路。當電池在運輸單位上少於 100kg 時候並不受其他關於這條例 所管理。當電池運輸單位大於 100kg 總重時候,此條例中的 5.4.1 和 5.4.3 的第 16 條關於危險貨物 適用





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The requirements of these sections are: 具體要求

- (1) Dangerous goods transport documentation to accompany the shipment, 危險貨物運輸檔要在運輸貨品中
- (2) The shipment must be described as "UN3496, BATTERIES, NICKEL-METAL HYDRIDE, CLASS 9" on the shipper's declaration for dangerous goods.
  - 運輸貨品需要標識為 "UN3496, BATTERIES, NICKEL-METAL HYDRIDE, CLASS 9"
- (3) The dangerous goods description must also be entered on the Dangerous Cargo Manifest and/or the detailed stowage plan in compliance with the IMDG Code requirements for shipboard documentation.
  - 危險貨品的標識需要進入其運輸單中或者有詳細地關於國際海運危險品法規所規定的裝載運輸計畫

## Section XV – Regulatory Information 調整資訊

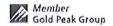
Special requirement be according to the local regulations.

特殊需求根據當地規則調整

## Section XVI - Other Information 其他資訊

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

本化學品安全技術說明書中的資料只針對本產品的特定材料。







Fw: GPE return pack - 18650 cell / SRN:16SZGP033 about debit note resend about defective battery handle===>GPHK退貨780EA的內容 Crystal Shen to: Joy Shen 2017/01/05 下午 01:15

Dear Joy,

FYI

Thanks & Best Regards
Crystal shen
Order Processing Team
Customer Service Dept.

**GPI International Limited** 

SZ line: +86-755-61862233 ext 3237 Email: crystal\_shen@goldpeak.com

----- Forwarded by Crystal Shen/CS/SZ-GPII/CN/GoldPeak on 2017/01/05 下午 01:15 -----

From:

Jackie Chen/PRC/GPEHZ/GPE

To:

Helen Pang/IND/GPII/HK/GoldPeak@GoldPeak, Crystal

Shen/CS/SZ-GPII/CN/GoldPeak@GOLDPEAK,

Date:

2017/01/05 上午 11:08

Subject:

Re: GPE return pack - 18650 cell / SRN:16SZGP033 about debit note resend about defective

battery handle

#### Dear Crystal,

以下退货主要是发生在下面两张订单的货(G1610176/G1603721),请知悉。

W1.1 29.1.1 Part Inquiry

@ 01/05/17

Unit: EA Class: A C3

Part No: 4060-1810+0 On hand: 5,439.0

BATTERY LITHIUM 3.7V 3A 2X GP18650-30U-2S1P

Green P/N All.QTY: 50.0

锂充电电池

(759 75911 759111)/0.095800KG

Net.QTY: 5,389.0

## GRN No. Doc No PO No. Ln Vend Rec Qty Rec Date Acp Qty Rej Qty Uai Qty

22163636 33040654 Y G1610176 1 01601 2000 11/17/16 0 2000 22161263 33040614 Y G1603721 1 01601 3500 11/11/16 0 50 3450 22135012 31077952 G1603721 1 01601 3600 09/05/16 0 810 2790 22129122 31077628 G1603721 1 01601 3000 08/19/16 456 2544

Any question pls contact me soon. Thanks and regards!

Jackie Tel:0752-2633975 Fax:0752-2633999

E-mail: jackie.chen@gpe-hkg.com

#### GP Electronics (Huizhou) Co. Ltd.

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Helen Pang

Hi Jackie, Thanks & Regards, Helen Pang

2016/12/29 17:28:30