

Material Safety Data Sheet

化學品安全技術說明書

Section 1 - Chemical Product and Company Identification

第一部分 化學品及企業標識

Product Name: Rechargeable Lithium Battery

產品名稱: 可充電鋰電池

Type/Model: ICR22430 2000MAH 3.7V

型號: ICR22430 2000MAH 3.7V

Manufacturer: HONG KONG TAC INDUSTRIAL CO., LTD

生產企業名稱: 香港藝洲實業有限公司

Address: FALT C,9/F WINNING HOUSE NOS.72 AND74 WING LOK STREET HK.

地址: 香港上環永樂街 72-74 號永利大廈 9 層 C 室

Tel: 00852-51230576

電話: 00852-51230576

Emergency Telephone: 00852-51230576

應急電話: 00852-51230576

Fax: 00852-35902333

傳真: 00852-35902333

E-mail: market@tacbattery.com

郵箱: market@tacbattery.com

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Section 2 -Composition/Information on Ingredient

第二部分 成分/組成資訊

Chemical Composition 化學名稱	Chemical Formula 分子式	CAS No: CAS 號:	Weight(%) 百分含量(%)
Lithium cobalt(iii) oxide 鈷酸鋰	Li Co O	12190-79-3	39
Graphite 石墨	C	7782-42-5	18.67
Organic Electrolyte 有機電解液	--	RR-14099-8	11.2
Polypropylene 聚丙烯	C ₃ H ₆	9003-07-0	3.5
Copper 銅	Cu	7440-50-8	8.94
Aluminum 鋁	Al	7429-90-5	3.67
Other 其他 steel	Fe	12597-68-1	15.02

Section 3 -Hazards Identification

第三部分 危險性概述

Health Hazards (Acute and Chronic)

健康危害

These chemicals are contained in a sealed can .Risk of exposure occurs only if the battery is mechanically or electrically abused.Contact of electrolyte and extruded lithium with skin and eyes should avoided.

化學物質洩漏會產生危害。電池 機械性或電力性破損會產生接觸性傷害。避免皮膚和眼睛接觸電解液。

Sign/symptoms of Exposure

暴露症狀

A shorted lithium battery can cause thermal and chemical burns upon contact with the skin.

短路的鋰電池接觸皮膚會產生電熱性損傷。

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Section 4-first Aid Measures

第四部分 急救措施

Eye: Flush eyes with plenty of water for at least 15 minutes ,occasionally lifting the upper and lower eyelids.Get medical aid.

眼睛接觸：迅速用大量水沖洗 15 分鐘以上，期間提起上下眼瞼。速就醫。

Skin: Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes .Get medical aid.

皮膚接觸：除去附著衣物，用大量水沖洗 15 分鐘。速就醫。

Inhalation: Remove from exposure and move to fresh air immediately.Use oxygen if available.

吸入：移到通風片。如需要給予輸氧。

Ingestion: give at least 2 glasses of milk or water.Induce vomiting unless patient is unconscious.call a physician.

食入：口服 2 杯牛奶或水。人員無意識下禁止催吐。速就醫。

Section 5 -Fire Fighting Measures

第五部分 消防措施

Flash point : N/A

閃點：不涉及

Auto-Ignition Temperature: N/A

燃點：無資料

Extinguishing Media : Dry chemical,CO₂.

滅火劑：乾粉，CO₂.

Special Fire-Fighting Procedures

滅火過程方法

Self-contained breathing apparatus.

配戴自主呼吸器

Unusual Fire and Explosion Hazards

燃爆危害

Cell my vent when subjected excessive heat-exposing battery contents.

過度加熱會導致內含物溢出

Hazardous Combustion Products

燃燒產物

Carbon monoxide,carbon dioxide,lithium oxide fumes.

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二氧化碳，一氧化碳、鋰的金屬氧化物，其他刺激性和毒性氣體

Section 6-Accidental Release Measures

第六部分 洩漏應急處理

Steps to be Taken in case Material is Released or Spilled

洩漏處理

If the battery material is released,remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases.With a cloth and dispose of it in a plastic bag and put into a steel can.The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate.Provide maximum ventilation.Avoid skin and eye contact or inhalation of vapors.Remove spilled liquid with absorbent and incinerate.

如電池發生破損並且電解液洩漏，疏散人員直到煙霧散盡。用布擦淨，並裝入袋子放入鋼桶內。

如電池灼熱，先遠離現場，冷卻電池，使蒸汽消散。充分通風。避免工眼睛接觸蒸汽。

Waste Disposal Method

廢棄物處理法

It is recommended to discharge the battery to the end,handing in the abandoned batteries to related department unified,dispose of the batteries in accordance with approved local,state,and federal requirements.Consult state environmental protection agency and/or federal EPA.

電池應放電完全，將廢棄的電池統一上交於相關部門，所有廢棄物必須參照聯合國，國家，地方性法規進行處置。參照國家環保局或聯邦 EPA。

Section 7 -Handling and Storage

第七部分 操作處置與存儲

The batteries should not be opened,destroyed or incinerate,since they may leak or rupture and release to the environment the ingredients they contain in the hermetically sealed container.

Do not short circuit terminals,or over charge the battery,forced over-discharge,throw to fire.

Do not crush or puncture the battery,or immerse in liquids.

電池禁止拆開，損毀或焚燒，嚴禁破損流出電解液。需在密封容器內儲存。

禁止短路，過充電、強制放電 或投入火中。

禁止擠壓或刺穿電池。

禁止將電池放入液體中。

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Precautions to be taken in handling and storing

操作和儲存

Avoid mechanical or electrical abuse.storage preferably in cool,dry and ventilated area, which is subject to little temperature change,Storage at high temperatures should be avoided.Do not place the battery near heating equipment,nor expose to direct sunlight for long periods.

禁止機械或電力損傷電池。儲存在乾燥、涼爽、通風的環境中，避免溫度化或高溫。遠離熱源，避免長時間陽光照射。電池在拆開、擠壓、遇火或高溫情況下，會引起起火或爆炸，嚴禁短路或非正確操作。

Other precautions

Batteries may explode or cause burns,if disassembled,crushed or exposed to fire or high temperatures.Do not short or install with incorrect polarity.

Section 8 - Exposure Controls,Personal Protection

第八部分 接觸控制/個體防護

Respiratory Protection

呼吸系統防護

In case of battery venting,provide as much ventilation as possible.Avoid confined areas with venting batteries.Respiratory protection is not necessary under conditions of normal use.

如電池洩漏，需充分通風。

Ventilation

手防護

Not necessary under conditions of normal use.

正常使用下，不需要

Protective Gloves

個人防護

Not necessary under conditions of normal use.

正常使用下，不需要

Other protective clothing or Equipment

其他防護

Not necessary under conditions of normal use.

正常使用下，不需要

Personal protection is recommended for venting batteries : Respiratory Protection Protective Gloves,Protective Clothing and safety glass with side shields.

如電池發生洩漏，需佩戴呼吸器，防護手套，作業工作服，化學防護鏡。

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Section 9 Physical and Chemical Properties

第九部分 理化特性

Nominal Voltage:11.1V

標稱電壓： 11.1V

Rated Capacity: 2.2Ah 24.42Wh

額定電容量： 2.2Ah 24.42Wh

Appearance Characters: Solid batteries for the cylindrical tasteless

外觀與性狀： 圓柱形無味的固體電池。

Section 10 -Stability and Reactivity

第十部分 穩定性和反應活性

Stability: Under normal use, good stability

穩定性： 正常使用下，穩定性良好

Conditions to Avoid: Heating ,mechanical ,abuse and electrical abuse.

禁忌物： 高溫、高熱、機械或電力損傷

Hazardous Decomposition Products: N/A

熱分解產物： N/A

Hazardous Polymerization: N/A

聚合產物： N/A

If leaked ,forbidden to contact with strong oxidizers,mineral acids,strong alkalis,halogenated hydrocarbons.

如果洩漏，避免接觸強氧化劑，避免接觸酸、堿、鹵素。

Section 11- Toxicological information

第十一部分 毒理學資料

Inhalation ,skin contact and eye contact are possible when the battery is opened,Exposure to internal contents,the corrosive fumes will be very irritation to skin ,eyes and mucous membranes.Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

當電池破損時，吸入，皮膚接觸或眼睛接觸可能產生刺激作用。刺激性蒸汽會損傷皮膚，眼睛和呼吸粘膜。

Section 12 -Ecological information

第十二部分 生態學資料

When promptly used or disposed the battery odes not present environmental hazard.

When disposed,keep away from water,rain and snow.

環境影響： 正確使用和處置電池不會對環境產生危害。

處置廢棄時，遠離水源，雨水和雪水。

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Section 13 -Disposal Considerations

第十三部分 廢棄處置

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

If batteries are still fully charged or only partially discharged ,they can be considered a reactive hazardous waste because of significant amount of uncreated or unconsumed lithium remaining in the spent battery.The batteries must be neutralized through an approved secondary treatment facility prior to disposal as a hazardous waste .Recycling of battery can be done in authorized facility ,through licensed waste carrier.

如果鋰電池未完全放電 或只部分放電 的情況 下，由於 部分未耗盡的鋰存在於電池中，此電池視為具有一定危害的危險廢棄物。必須通過經認可的其進行處理方可廢棄。在相關法律法規下，電池可迴圈再利用。

Sections 14 -Transport information

第十四部分 運輸資訊

The polymer lithium ion batteries has passed the test UN38.3

該聚合物鋰離子電池已通過 UN38.3 測試。

According to packing instruction PI965~PI967 section II of IATA DGR 59th Edition for transportation or the special provision 188 of IMDG.

運輸過程中請根據危險品規則 DGR 第 59 版包裝規定 PI965~PI967 第 2 部分，海運危險品規則 IMDG 特殊規定 188 執行。

The products are not subject to dangerous goods.

該產品不屬於危險品

More information concerning shipping .testing,marking and packaging can be obtained from Label master at <http://www.labelmaster.com>.

更多關於鋰離子電池運輸、測試、 包裝等相關規定

請參見網址: <http://www.labelmaster.com>.

Separate Lithium -ion batteries when shipping to prevent short -circuiting.They should be Packed in strong packaging for support during transport .Take in a cargo of them without Falling,dropping,and breakage.Prevent collapse of cargo piles and wet by rain.

電池相互隔開並防止短路、洩漏， 並裝放在結實的容器內運輸。

注：該電池應在半荷電狀態（20-50%充電狀態）下包裝成臬進行運輸，在運輸過程中應防止劇烈振動、衝擊或擠壓，防止日曬雨淋。具體細節請對照本文第七部分操作處置與儲存。

Transport Fashion: By air ,by sea.

運輸方式：空運，海運。

Section 15 - Regulatory Information

第十五部分 法規資訊

Law Information

法規資訊

《Dangerous Goods Regulation》

《危險品規則》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《危險品貨物運輸規章範本》

《International Maritime Dangerous Goods》

《國際海上危險貨物運輸規則》

《Technical Instructions for the Safe Transport of Dangerous Goods》

《危險物品航空安全運送技術指南》

《Classification and code of dangerous goods》

《危險貨物分類和品名編號》

《Occupational Safety and Health Act》 (OSHA)

《職業安全與衛生條例的危害》

《Toxic Substances Control Act 》 (TSCA)

《毒性物質控制法》

《Consumer Product Safety Act 》 (CPSA)

《消費品安全法》

《Federal Environmental Pollution Control Act 》 (FEPCA)

《聯邦環境污染控制法》

《The Oil Pollution Act 》 (OPA)

《石油污染法》

《Superfund Amendments and Reauthorization Act Title III(302/311/312/313) 》 (SARA)

《附加基金修正復審法 III(302/311/312/313)》

《Resource Conservation and Recovery Act 》 (RCRA)

《資源保護和回收法》

《Safety Drinking Water Act 》 (CWA)

《安全飲水法》

《California Proposition 65》

《加州提案 65》

《Code of Federal Regulations 》 (CFR)

《美國聯邦法規》

In accordance with all Federal, State and Local laws.

可參照聯合國、國家、地方性法規。

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Section 16-Additional Information

第十六部分 其他資訊

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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Make people: Jewels

填寫人：李偉

Phone: 00852-51230576

電話： 00852-51230576

Address: FALT C,9/F WINNING HOUSE NOS.72 AND74 WING LOK STREET HK.

地址：香港上環永樂街 72-74 號永利大廈 9 層 C 室

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Professional post: R&D Engineer

崗位：研發工程師

Make unit: R&D Department

部門：研發部

