

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

SECTION 1 – Supplier Information

Supplier Name : MMD Hong Kong Limited

Emergency & Information Phone No : 86-755-3635 8914

Address : Unit 1006-7, 10/F, C-Bons International Center, 108 Wai Yip Street, Kwun Tong, Hong Kong

樣品名稱(Sample Name) : 鋰離子電芯 Li-ion Cell

樣品型號(Model Name) : 1260110

規格(Rating) : 3.7V 10000mAh 37Wh

SECTION 2 – Composition/Information on Ingredient

危險成分 (化學名稱) Hazardous Ingredients (Chemical Name)	含量及含量百分比 (%) Concentration or concentration ranges(%)	CAS編號 CAS Number
錳酸鋰Lithium Manganate	22.54	12057-17-9
鈷酸鋰 Lithium cobalt oxide	22.6	12190-79-3
石墨 Graphite	18.46	7782-42-5
聚偏氟乙烯 Polyvinylidene Fluoride	0.95	24937-79-9
丁苯橡膠 SBR	0.45	9003-55-8
銅箔 Copper Foil	8.2	7440-50-8
鋁箔Aluminum Foil	4.37	7429-90-5
鋁包裝箔Aluminum packing foil	2.53	7429-90-5
聚乙烯隔板 PE Separator	2.36	90989-93-8
電解液 Electrolyte	17.32	--
鎳 Nickel	0.22	7440-02-0

SECTION 3 – Hazards Identification

爆炸危險性 Explosive risk	該物品不屬於爆炸危險品 This article does not belong to the explosion dangerous goods
易燃危險性 Flammable risk	該物品不屬於易燃危險品 This article does not belong to the flammable material

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

氧化危險性 Oxidation risk	該物品不屬於氧化危險品 This article does not belong to the oxidation of dangerous goods
毒害危險性 Toxic risk	該物品不屬於毒害危險品 This article does not belong to the toxic dangerous goods
放射危險性 Radioactive risk	該物品不屬於放射危險品 This article does not belong to the radiation of dangerous goods
腐蝕危險性 Mordant risk	該物品不屬於腐蝕危險品 This article does not belong to the corrosion of dangerous goods
其他危險性 other risk	該物品為鋰離子電芯，瓦時率為37Wh。 This article is the Li- ion Cell, Watt hour rate 37Wh.

SECTION 4 –First aid measures

眼睛接觸：提起眼皮用大量水沖洗眼睛至少15分鐘，立即就醫。

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

皮膚接觸：脫掉被污染的衣服，並用大量水或淋浴沖洗皮膚15分鐘，立即就醫。

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

吸入：如有吸入，迅速脫離現場至新鮮空氣處，如果停止呼吸，進行人工呼吸。如果呼吸困難，供給氧氣。

After Inhalation: If inhaled, quickly leave the site to fresh air. If you stop breathing, perform artificial respiration. If breathing is difficult, supply oxygen.

食入：如有知覺，請用水沖洗口腔，就醫。

After Ingestion: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

SECTION 5 – Fire-fighting measures

危險特性：在火災時可釋放有害濃煙、氣體或者蒸汽。

Characteristics of Hazard: Toxic fumes; gases or vapors may evolve on burning.

有害燃燒產物：一氧化碳和二領化碳、HF、氟磷化物。

Hazardous Combustion Products: CO,CO2, HF, phosphorus fluoride.

滅火方法及滅火劑：對鋰電池，大量冷水是一個有效的滅火劑。不要使用溫或熱水。不要使用哈龍類滅火材料。可使用乾粉、沙、土。

Fire-extinguishing Methods and Extinguishing Media: Copious amounts of cold water are an effective

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

extinguishing medium for lithium batteries. Don't use warm or hot water. Don't use Halon type extinguishing material.

May use dry powder, sand, earth.

滅火注意事項：消防人員須 佩戴防毒面具、穿全身消防服。

Attention in Fire-extinguishing: The Firemen should put on antigas masks and full fire-fighting suits.

SECTION 6 – Accidental release measures

當電池發生洩漏，液體可以用砂，土，或其他惰性物質吸受污染的區域應同時通風。

When leakage of batteries happens. liquid could be absorbed with sands, earth, or other inert substance, and the contaminated area should be ventilated meantime.

未放熱或燃燒的破損電池，應裝入密封的塑膠袋或容器。

Damaged batteries that are not hot or burning should be placed in a sealed plastic bag or container

SECTION 7– Handling and storage

操作注意事項：儲存時遠離食物和水源。吃飯喝水前徹底清洗雙手。儲有化學物的容器搬用時照防止靜電的產生和積聚。

Precautions for safe handling: Consumption of food and beverage should be avoided in work areas.

Wash hands with soap and water before eating, drinking. Ground containers when transferring liquid to prevent static accumulation and discharge.

有關火災及防止爆炸的資料：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。

Information about fire and explosion protection: Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

儲存注意事項：儲存在一個低溫，乾燥，通風良好的環境。遠離熱源，避免長時間陽光照射。未使用時密封容器。

Conditions for safe storage, including any incompatibilities: Requirements to be met by storerooms and receptacles. Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the long time of sunlight.

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

SECTION 8 – Exposure controls/personal protection

最高容許濃度：沒有適用標準

Maximum Allowable Concentration: No Standard available

工程控制：操作未破損的電池，沒有工程控制要求。對於破損的電池，個人防護用品應包括化學品防護手套和安全眼鏡。

Engineering Controls: no engineering controls are required for handling batteries that have not been damaged. Personal protective equipments for damaged batteries should include chemical resistant gloves and safety glasses.

SECTION 9 – Physical and Chemical Properties

有關基本物理及化學特性的信息

Information on basic physical and chemical properties

外觀 Appearance	銀色 Silvery
形狀 Form	方形 Prismatic
氣味 Odour	無味 Odorless

SECTION 10 – Stability and reactivity

穩定性：常溫常壓穩定。

Stability : Stable under normal temperatures and pressures.

禁配物：氧化劑。

Incompatibility : Oxidizing agents.

避免接觸的條件：熱和明火、短路和水。

Conditions to Avoid : Heat and open flame, short circuit, and water.

聚合危害：不會發生。

Hazardous polymerization : Will not occur.

分解產物：一氧化碳、二氧化碳、HF、氟磷化物。

Decomposition Products: CO, CO₂, HF, Phosphorus fluoride.

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

SECTION 11– Toxicological information

標誌及症狀：無，除非電池破裂。

Signs & symptoms : None, unless battery ruptures.

內部物質暴露的情況下，蒸汽煙霧可能對眼睛和皮膚的刺激性。

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

吸入：對肺有刺激性。

Inhalation : Lung irritant.

皮膚接觸：對皮膚刺激性。

Skin contact: Skin irritant.

眼睛接觸：對眼睛有刺激性。

Eye contact: Eye irritant.

食入：吞下中謝。

Ingestion : Poisoning if swallowed.

下列情況下會危險人員身體健康：如果與電池內部材料直接接觸，皮膚可能會出現乾燥、灼燒等輕微或嚴重的刺激，並且損壞靶器官的神經，肝臟和腎臟。

Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to server irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.

SECTION 12 – Ecological Information

生態毒性:無

Ecological Toxicity: N/A

生物降解性：無

Biodegradability: N/A

非生物降解性：無

Non-biodegradability: N/A

其它有害作用：該物質對環境有無明顯危害。

Other Hazardous: Will not effect environmental evidently。

SECTION 13 – Disposal consideration

廢棄處置方法：建議迷照國家和地方法規處置或再利用。

Waste Treatment: Recycle or dispose of in accordance with government, state & local regulations.

廢棄注意事項：廢電池不能被當作普通垃圾。不能扔進火中或置於高溫下。不能解體，刺穿，破碎或類似的處理。最好的辦法是回收利用。

Attention for Waste Treatment: Deserted batteries couldn't be treated as ordinary trash.

Couldn't be thrown into fire or placed in high temperature. Couldn't be dissected, pierced, crushed or treated similarly. Best way is recycling.

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

SECTION 14 –Transport information	
UN 編號 UN NO.	UN3480 UN3481
運輸專有名稱 Proper Shipping Name	UN3480 鋰離子電池 UN3481 Lithium Ion Batteries UN3481 鋰離子電池與設備打包 UN3481 Lithium Ion Batteries Packed With Equipment UN3481 鋰離子電池裝在設備中 UN3481 Lithium Ion Batteries Contained In Equipment
運輸標籤 Label for conveyance	鋰電池操作標籤 Lithium Battery Label 9類危險品標籤 Class 9 Hazard Label 僅限貨機標籤 Cargo aircraft Only Label

危險品規例規定，運輸前，每一個電池設計須通過聯合國試驗和標準手冊38.3節所載的測試

The dangerous goods regulations require that each battery design be subject to tests contained in Section 38.3 of the UN Manual of Tests and Criteria prior to being offered for transport .

危險性分類：

該電池包裝應過守IATA DGR 62版包裝說明 965/966/967的運輸要求。

The package of battery should be complied with the requirements of Packing Instruction 965/966/967 of IATA DGR 62nd Edition for transportation.

該電池包裝應必 守IMDG (39-18) 或 “關於危險貨物運輸的規章範術本” 20th的特殊規定188。

The package of battery should be complied with the requirements of 188 of IMDG (39-18) or the « Recommendations On The Transport Of Dangerous Goods-Model Regulation s» (20th).

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

SECTION 15– Regulation information

法規資訊：

聯合國《關於危險貨物運輸的建議書規幸範本》(20版)、國際航空運輸協會《危險品規則》(62版)、《國際海運危險貨物規則》(IMDGCODE)(39-18版)、《國際危險貨物道路運輸歐洲協定》(ADR)(2019版)、《國際危險貨物鐵路運輸歐洲協定》(RID)(2019版)

Regulatory information: Recommendations on the transport of dangerous goods-model Regulations 20th, IATA dangerous goods regulations 62nd, International Maritime Dangerous Goods Code (39-18), European Agreement concerning the International Carriage of Dangerous Goods by Road (2019), Regulations concerning the International Carriage of Dangerous Goods by Rail (2019)

SECTION 16– Other information

None

Material Safety Data Sheet for Lithium Button Cell Series

Document Number: MSDS-1260110-2021

Photos of Samples and Labels / 樣品照片及標識

