

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION

Lithium-ion Battery

MANUFACTURER

Lion Battery System (Shanghai) Ltd.
No.508 ChunDong Road
Shanghai, 201108 China
TEL: 86-21-54422800

2. COMPOSITION INFORMATION

A. Lithium-Ion Single Cell Matrix

Manufacture	Cell	Type	Capacity (mAh)	Lithium Weight(g)/Cell	No Cd/Pb/Hg
HYB	ICP853450A	Lithium Ion	1400	0.42	None
N/A					

B. Battery Product Matrix

Battery Name	PE P/N	Customer P/N	Capacity (mAh)	Lithium Weight(g)	Wh	Pack Configuration	Cell number	No Cd/Pb/Hg
Iridium	L02L40524	BAT0602	2800	0.84	10.4	1S2P	ICP853450A	None
N/A								

3. MSDS FOR CELL

See the Doc. below: Cell MSDS



Material Safety Data Sheet

Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Lithium-ion cell

Product Identification: ICP633446AR

Item	Value	Remark
Wh-capacity	3.33Wh	<20Wh for cell

Manufacture: HYB Battery Co., Ltd

Address: 38, Shakeng 2nd Road, Biling, Pingshan, Shenzhen, 518118, China

Tel: 0755-84686666 Ext: 8127

Emergency Telephone: 0755-84686666 Ext: 8127

Fax: 0755-84686256

Email: chengjie@hyb-battery.com

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Chemical Formula	CAS No.	In % by Weight
Lithium Cobalt Dioxide	LiCoO ₂	12190-79-3	37
Graphite	C	7782-42-5	17
Electrolyte (Lithium Hexafluorophosphate)	LiPF ₆	21324-40-3	15

3. HAZARDS IDENTIFICATION

Health Hazards (Acute and Chronic)

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 be avoided.

Sign/Symptoms of Exposure

A shorted battery can cause thermal and chemical burns upon contact with the skin. May be a reproductive hazard.

4. FIRST-AID MEASURES

Ingestion: Do not induce vomiting or give food or drink. Seek medical attention immediately.

Inhalation: Provide fresh air and seek medical attention.

Eyes contact: Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of the chemical remains. Seek medical attention.

Skin contact: Remove contaminated clothing and thoroughly wash with soap and plenty of water. If irritation persists, seek medical attention.

5. FIRE-FIGHTING MEASURE

Flash Point: N/A

Auto-Ignition Temperature: N/A



Extinguishing Media: Water, CO₂

Special Fire-Fighting Procedures: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Cell may vent when subjected to excessive heat-exposing battery contents.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

6. ACCIDENTAL RELEASE MEASURES

Steps to be Taken in case Material is Released or Spilled

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up 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 battery 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.

Waste Disposal method

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.

7. HANDLING AND STORAGE

Storage: Do not place the cell or battery near heating equipment, nor expose to direct sunlight for long periods. Elevated temperatures can result in shortened battery life and degrade performance.

Store in cool place (temperature: -20-45C, humidity: 45-75%).

Mechanical Containment: If potting or sealing the cell or battery in an airtight or watertight container is required, consult your HYB Battery Co., Ltd. Representative for precautionary suggestions. Do not obstruct safety release vents on cells.

Encapsulation of batteries will not allow cell venting and can cause high pressure rupture.

Handling: 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. Incompatible products: Conductive materials, water, seawater, strong oxidizers and strong acids Packing material (recommended, not suitable): Insulative and tear proof materials are recommended.

The contents of a leaking cell, when exposed to water, may result in a fire and/or explosion. Crushed or damaged cells and batteries may result in a fire.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Investigate engineering techniques to reduce exposures use with adequate ventilation and recommended personal protective equipment.

Eye/Face protection: Use good industrial practice to avoid eye contact. Processing of this product releases vapors or fumes which may cause eye irritation. Where eye contact may be likely wear chemical goggles and have eye flushing equipment



available

Skin protection: Minimize skin contamination by following good industrial hygiene practices. Wearing protective glove is recommended. Wash hands and contaminated skin thoroughly after handling.

Respiratory protection: Avoid breathing dust and processing vapors. When adequate ventilation is not available, wear a NIOSH/MSHA respirator approved for protection against inorganic dusts.

Special clothing: Robber gloves.

9. PHYSICAL and CHEMICAL PROPERTIES

Nominal Voltage: 3.7V

Nominal Capacity: 900mAh

Appearance characters: Metallic color, quadrate, odorless, solid battery.

10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to Avoid: Heating, mechanical abuse and electrical

Hazardous Decomposition Products: N/A

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

11. TOXICOLOGICAL INFORMATION

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

12. ECOLOGICAL INFORMATION

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

13. DISPOSAL CONSIDERATIONS

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

If battery are still fully charged or only partially discharged, they can be considered a reactive hazardous waste because of significant amount of not reaction or unconsumed lithium remaining in the spent battery. The battery 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.



14. TRANSPORT INFORMATION

HYB batteries will be regulated as Hazardous Material by the International Civil Aviation Organization (ICAO) the International Air Transport Association (IATA) when transporting more than 8 batteries in a single package by aircraft. They must be transported according to the requirement in Special Provision "PI965/ 966 /967 " of IATADGR-2013, 54nd edition.

The rechargeable Lithium-Ion battery pack as stated in Appendix are made in compliance to the requirements stated in the latest edition of the IATA Dangerous Goods Regulations Packing Instruction 965 section IB such that they can be transported as a Class9 dangerous goods.(cancelled, use above sentences)

However, if those lithium-ion batteries are built in the battery packs, or contained in an equipment, then it is the shipper to ensure that the consignment are packed in compliance to the latest edition of the IATA Dangerous Goods Regulations section IB of either Packing Instruction 966 or 967 in order for that consignment to be declared as RESTRICTED

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

- The International Civil Aviation Organization (ICAO) Technical Instructions
- The International Air Transport Association (IATA) Dangerous Goods Regulations (54st Edition, 2013)
- The International Maritime Dangerous Goods (IMDG) Code,
- US Hazardous Materials Regulations 49 CFR (Code of Federal Regulations) Sections 173-185 Lithium batteries and cells,
- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries, 4th revised edition (UN3480)

Date:20121229

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 and the Manual of Testes and Criteria that can be treated as "Class9 Dangerous Goods".(cancelled)

Transport Fashion: By air, by sea.

Packaging Information: Carton.

Lithium ion cells or batteries manufactured, packaged and shipped by HYB Battery Co., Ltd meet the requirements specified above. Any Lithium ion cells or batteries subsequently repackaged or reshipped are required to meet all of the requirements specified above.

15. REGULATORY INFORMATION

Law Information

Dangerous Goods Regulation

Recommendations on the Transport of Dangerous Goods Model Regulations

International Maritime Dangerous Goods

Classification and Code of Dangerous Goods

OSHA Hazard Communication Standard Status

16. OTHER INFORMATION

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

For more information, please contact :

Chen jie

Quality Engineer

Address: 38, Shakeng 2nd Road, Biling, Pingshan, Shenzhen, 518118, China

Tel : 86-755-84686666 Ext:8127

Fax : 86-755-84686256

Mobile phone: +86-13760498432

Email: chengjie@hyb-battery.com

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