

Material Safety Data Sheet

Description: Rechargeable Lithium-ion Battery

1. Chemical Product Identification

Product Identification: Rechargeable Lithium-ion Battery

Model No.: BTY-M4B 3950mAh 11.55V 45.63WH

Company Information

Manufacturer: HuiZhou GanFeng LiEnergy Battery Technology Co., Ltd.

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Hazardous Ingredients	Percentage%	Cas. No
Aluminum Foil	7.15	7429-90-5
Copper Foil	9.4	7440-50-8
Lithium Cobalt Oxide	38.2	12190-79-3
styrene-butadiene rubber1500 (SBR)	3.0	9003-55-8
N-methyl-pyrrolidone(NMP)	3.5	872-50-4
Sodium Carboxymethyl Cellulose(CMC)	3.5	9004-32-4
Polyvinylidene Fluoride (PVDF)	2.2	24937-79-9
Carbon (Proprietary)	19.6	7782-42-5
1,3-Propanesultone	1	1120-71-4
Electrolyte (proprietary)	12.45	21324-40-3
		96-49-1
		616-38-6
		623-53-0

3. Hazardous Identification

Emergency Overview:

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

Use extinguishing media suitable for materials burning in fire.

Primary Routes of Entry:

Skin contact, Skin absorption, Eye contact. Inhalation, and Ingestion.

Symptoms of exposure:

Skin contact:

No effect under routine handling and use

Skin absorption:



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No effect under routine handling and use

Eye contact:

No effect under routine handling and use

Inhalation:

No effect under routine handling and use.

Reported as caseinogens

Not applicable.

4. First Aid Measures

Inhalation:

Not a health hazard.

Eye contact:

Not a health hazard.

Skin contact:

Not a health hazard.

Ingestion:

If swallowed, obtain medical attention immediately.



IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL DUE TO DAMAGED OUTER CASING THE FOLLOWING ACTIONS ARE RECOMMENDED:

Inhalation:

Leave area immediately 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. 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

Fires involving Li-ion Battery can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended to extinguish the fire.

Such as: dry powder/carbon dioxide fire extinguisher

Special Fire fighting Instructions:

If possible, remove cell(s) form fire fighting area . If heated above 160C, cell(s) may explode/vent.

Fire fighting Equipment:

Use NIOSH/MASHA 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 control:

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

Personal Protection:

Respirator

Not required during normal operations. SABA required in the event of a fire

Eye /Face protection

Not required safety practices of employer during normal operations. If the battery is damaged or leaking should wear chemical safety goggles.

Gloves

Not required for handling of cells.

Foot protection

Steel toed shoes recommended for large container handling.



9. Physical and Chemical Properties

State	Solid 固体
Odor	N/A
PH	N/A
Vapor pressure	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

Incompatibilities:

None during normal operation. Avoid exposure to heat.

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 illicit toxicological properties during routing handling and use.

Sensitization: No

Teratogenicity: No

Reproductive toxicity: No

Acute toxicity: No



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 bioaccumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

13. Disposal Considerations

California regulated debris

RCRA Waste Code: Non-regulated

RCRA: No

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

14. Transport Information

For the international transport of lithium batteries, they must comply with these regulations:

The goods are packaged according to the special provision 188 of IMDG, Dangerous Goods Regulations (DGR) by International Air Transport Association (IATA) and Technical Instructions for the Safe Transport of Dangerous Goods by Air (TI) by International Civil Aviation Organization (ICAO). These regulations are based on the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria.

Lithium batteries which meet the requirements of UN38.3 (UN Manual of Tests and Criteria, Part III, subsection 38.3) could be transported by air and by sea as ordinary goods, otherwise should be transported according to Class 9, Packing Group II hazardous goods.

As the published of the UN Recommendations on the Transport of Dangerous Goods, all these regulations have added some new contents to regulate the transport of lithium ion batteries. For lithium ion batteries, UN ID

number is 3480. For lithium ion batteries contained in equipment or lithium ion batteries packed with equipment,

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UN ID number is 3481. The consignment should be fully described by proper shipping name and packed, marked and in proper condition for carriage by air. The consignment is not classified as dangerous under the current edition of the IATA 65th Effective whose validity is 2024, Dangerous goods regulation and all applicable carrier and government regulations. The consignment is not classified as dangerous under the current edition of the International Maritime Dangerous, Code(IMDG CODE 41-22) Special Provision 230, 310, 348, 376, 377, 384, 387.

For transported by air, Lithium-ion Cells/Batteries shipped cargo: must comply with **Section IB of PI965, Section II of PI966, Section II of PI967** accordingly; For cells, the Watt-hour rating should not be more than 20Wh; For batteries, the Watt-hour rating should not be more than 100Wh. Watt- hour rating must be marked on the outside of the battery case (marked by manufacturer).

1. Each consignment must be accompanied with a document such as an air waybill with an indication. For those Lithium ion cells/ batteries contained in equipment, the equipment must be equipped with an effective means of preventing accidental activation. The telephone number for additional information For Dongguan Ganfeng Electronics Co., Ltd. cells is +86-752-8989111.
2. The net quantity of lithium-ion battery(cells) shall not exceed 10kg if transport as PI 965 section IB, and need to paste the Li-ion battery marking and Class 9 hazardous goods marking; The net quantity of lithium-ion battery(cells) shall not exceed 5kg if transport as PI 966 or PI 967, and need to paste the Li-ion battery marking.
3. Each package must be capable of withstanding a 1.2m drop test in any orientation without damage of cells or batteries contained therein. Lithium batteries which meet the requirements of which could be transported by air, and the batteries manufactured by Dongguan Ganfeng Electronics Co., Ltd. meet these requirements. (Lithium batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are forbidden for transport.)
4. Cells and batteries must be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to short circuit.



15.Regulatory Information

Marking consideration: European Union: According to Directive 2013/56/EU, the batteries have to be marked with the crossed wheel bin symbol.

According to Dangerous Goods Regulations (see 14.) battery packs have to be marked with the Watt-hour rating.

United Nations : Packaging ICAO: 903 for Air transport, special provision A154, UN Manual of Tests and Criteria, Part III, Sub-section 38.3;

IMDG: 903 for Sea transport, special provision A154, UN Manual of Tests and Criteria, Part III, Sub-section 38.3.

International conventions:	Air	IATA	Yes	
		Sea	IMDG	Yes
		Land	ADR(Road)	Yes
			RID (Rail)	Yes

International: This MSDS conforms to European Union (EU), the International Standards Organization (ISO) and the International Labour Organization (ILO).
China: This MSDS in accordance with GB/T18287-2013:General specification of lithium-ion battery for cellular phone.
USA : This MSDS meets/exceeds OSHA requirements; Code of Federal Regulations (49CFR Ch.1§173-185)

16. Other Information

The transport of rechargeable lithium-ion batteries is regulated by various bodies (IATA, IMO, ADR, U S-DOT) that follow the United Nations "Recommendations on the Transport of Dangerous Goods, Model Regulations, 17th Revised edition - Amendment 1 «Lithium Batteries»".



Hazardous 危险: Non-hazardous 非危险

SIGNER'S FULL NAME 签名 : _____

TITLE: Manager 职位: 品质副总

COMPANY NAME: 公司名称: