

### **MSDS Report**

Prepared For:	Shenzhen Yiou New Energy Co.,LTD. Floor 1, Building A2, New Era Gongrong Industrial Park, No.2 Shihuan Road, Shilong Community, Shiyan Street, Baoan District, Shenzhen	
Product Name:	Polymer lithium ion battery	
Model:	103450	
Nominal Voltage:	3.7V	
Typical Capacity:	2000mAh 7.4Wh	
Weight:	33.6g < 6 5 1 9 1 8 c 6	
Dimension:	(51.5 X 34.0 X 10.0)mm (L×W×T)	
Prepared By	Shenzhen NCT Testing Technology Co., Ltd. B2A101/B2A201/B2A202, Fuqiao 6th Area, Xintian, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China	
Report No.	NCT240261116XM1-1	
Written by :	Bonnie Ma Bonnie Ma	
Inspected by :	Miya Li Miya Li 2008 Sup 2024.06.28	

Tel: 86-755-23218380

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### **Material Safety Data Sheet**

#### Section 1- Chemical Product & Company Identification

Product Name: Polymer lithium ion battery

Manufacture: Shenzhen Yiou New Energy Co., LTD.

Address: Floor 1, Building A2, New Era Gongrong Industrial Park, No.2 Shihuan Road, Shilong Community, Shiyan Street, Baoan District, Shenzhen n hnology

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Item Code: NCT240261116XM1-1

#### Section 2- Hazards Identification

Hazard Description	Not dangerous with normal use. Do not dismantle, open or shred the battery ingredients contained within or their ingredients products could be harmful.
Primary Route(s) of Exposure	Inhalation, Ingestion, Skin contact and Eye contact.
Potential Health Effects	<ul> <li>Inhalation: Vapors or mists from a ruptured battery may cause respiratory irritation.</li> <li>Ingestion: The battery ingredients contained within or their ingredients products can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.</li> <li>Skin: Skin contact with contents of an open battery can cause severe irritation or burns to the skin.</li> <li>Eye: Eye contact with contents of an open battery can cause severe irritation or burns to the eye.</li> </ul>

#### Section 3- Composition/Information on Ingredients

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Chemical Name	Concentration or concentration ranges (%)	CAS Number
Lithium Cobalt Oxide	35	12190-79-3
Graphite	22	7782-42-5
Copper	10	7440-50-8
Aluminum	5	7429-90-5
Ethylene carbonate	14	96-49-1
Polypropylene	5	9003-07-0
Carbonate, methyl ethyl	4	623-53-0
Phosphate(1-), hexafluoro-, lithium	testing lec	21324-40-3
Note: CAS number is Chemical Abs N/A=Not apply.	stract Service Registry Number.	20%
Section 4- First Aid Measures		

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Inhalation	Remove source of contamination or move victim to fresh air. Obtain medical advice.
Ingestion N	Please rinse mouth thoroughly with water. Induce vomiting under the guidance of professional personage. Please seek medical treatment in time.
Skin contact	Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.
Eye contact	Irrigate with flowing water for 15 minutes. If irritation persists, consult a physician.

#### Section 5- Fire Fighting Measures

Characteristics of Hazard	Toxic fumes, gases or vapors may evolve on burning.
Hazardous Combustion Products	Carbon monoxide, carbon dioxide, lithium oxide fumes and so on.
Fire-extinguishing Methods and Extinguishing Media	Please use water, dry sand and other proper fire extinguishing media.
Attention in Fire- extinguishing	The firemen should put on antigas masks and full fire-fighting suits.

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#### Section 6- Accidental Release Measures

Personal Precautions, protective equipment, and emergency procedures	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8.
Environmental Precautions	Prevent material from contaminating soil and from entering sewers or waterways.
Methods and materials for Containment	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.
Methods and materials for cleaning up	Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.
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Section 7- Handling and Storage	

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Handling	Don't handing the batteries in manner that allows terminals to short circuit. Do not open, disassemble, crush or burn battery.
Storage	If the battery is subject to storage for such a long term as more than 3 months, it is recommended to recharge the battery periodically.
	Do not storage the battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
	Keep out of reach of children.
	Do not expose the battery to heat or fire. Avoid storage in direct sunlight.
	Do not store together with oxidizing and acidic materials.

#### Section 8 - Exposure Controls/Personal Protection

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.
Personal Protective Equipment	Respiratory Protection: In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use. Not necessary under conditions of normal use. Protective Gloves: Not necessary under conditions of normal use. Other Protective Clothing or Equipment: Not necessary under conditions of normal use. Personal Protection is recommended for venting battery: Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

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#### Section 9- Physical and Chemical Properties

#### 第九部分 理化特性

	Form: Solid
Physical State	Color: Yellow&Silver
	Odour: Odorless
Change in condition	
pH, with indication of the concentration	No data is available
Melting point/freezing point	No data is available
Boiling Point, initial boiling point	No data is available
Flash Point	No data is available
Upper/lower flammability or explosive limits	No data is available
Vapor Pressure	No data is available
Vapor Density: (Air = 1)	No data is available
Density/relative density	No data is available
Solubility in Water	Insoluble
n-octanol/water partition coefficient	No data is available
Auto-ignition temperature	No data is available
Decomposition temperature	No data is available
Odout threshold	No data is available
Evaporation rate	No data is available
Flammability (soil, gas)	No data is available
Viscosity	No data is available

#### Section 10 – Stability and Reactivity

Stability	Stable under normal temperatures and pressures.
Conditions to Avoid	Heat above 70°C or Incinerate, Deform, Mutilate, Crush, Disassemble, Overcharge, Short circuit, Expose over a long period to humid conditions.
Hazardous Decomposition Products	Toxic Fumes, and may form peroxides.
Possibility of Hazardous ReactionIf leaked, forbidden to contact with strong oxidizers, mineral acids, str alkalis, halogenated hydrocarbons.	
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#### Section 11 – Toxicological Information

Irritation	In the event of exposure to internal contents, vapor fumes may be very irritating to the eyes and skin.
Sensitization	No data is available
Reproductive Toxicity	No data is available
Toxicologically Synergistic Materials	No data is available

#### Section 12-Ecological Information

General note	Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Anticipated behavior of a chemical product in environment/possible environmental impact/ ecotoxicity	No data is available
Mobility in soil	No data is available
Persistence and Degradability	No data is available

# Section 13 – Disposal Considerations

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

#### Section 14 – Transport Information

The Polymer lithium ion battery(model: 103450) tested according to the requirements of the UNITED NATIONS "Manual of Tests and Criteria" Part III, subsection 38.3;

The Polymer lithium ion battery was 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;

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The package must be handled with care and that a flammability hazard exists if the package is damaged.

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

- The International Air transport Association (IATA) Dangerous Goods Regulations.

The Polymer lithium ion battery can be shipped by air in according to Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966 $\sim$ 967 of the 2024 IATA Dangerous Goods regulations 65<sup>th</sup> Edition.

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UN number of lithium battery: UN3480 or UN3481; UN Proper shipping name/Description (technical name): Lithium ion batteries or Lithium ion batteries packed with equipment or Lithium ion batteries contained in equipment; UN Classification (Transport hazard class): Class 9 (PI965 Section IB) or N/A (PI966~967 Section II) PG Packing Group: N/A - The International Maritime Dangerous Goods (IMDG) Code. The battery is not restricted according to IMO IMDG Code (inc Amdt 41-22).

UN number of lithium battery: UN3480 or UN3481;

UN Proper shipping name/Description (technical name): Lithium ion batteries or Lithium ion batteries packed with equipment or Lithium ion batteries contained in equipment;

UN Classification (Transport hazard class): N/A

PG Packing Group: N/A

Marine pollutant(Y/N): N

Need to meet the Special Provision: International maritime dangerous goods code (IMDG) 188, 230, 348, 384. 2004

EmS No.: F-A, S-I

#### Section 15 – Regulatory Information

《Dangerous Goods Regulations》

«Recommendations on the Transport of Dangerous Goods Model Regulations»

《International Maritime Dangerous Goods》

«Technical Instructions for the Safe Transport of Dangerous Goods»

«Classification and code of dangerous goods»

(Occupational Safety and Health Act) (OSHA)

«Toxic Substance Control Act» (TSCA)

《Consumer Product Safety Act》(CPSA)

《Federal Environmental Pollution Control Act》 (FEPCA)

(The Oil Pollution Act) (OPA)

Superfund Amendments and Reauthorization Act Title [][(302/311/312/313)] (SARA)

《Resource Conservation and Recovery Act》(RCRA)

«Safety Drinking Water Act» (CWA)

«California Proposition 65»

«Code of Federal Regulations» (CFR) 49 CFR sections 100-185, 49 CFR -173.185

New EU Battery Regulations (EU) 2023/1542

Regulation (EC) No. 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

2008

In accordance with all Federal, State and local laws.

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#### Section 16 – Additional Information

The information above is believed to be accurate and represents the best information currently available to us. However, we makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

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