



Shenzhen Toby Technology Co., Ltd.

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang
Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China

Tel: (86) 755-26509301/02 Fax: (86) 755-26509195 Http: //www.tongbiao.com

MATERIAL SAFETY DATA SHEETS

Section 1 –SAMPLE INFORMATION:

1. **Sample Description:** Rechargeable Li-Polymer Battery
2. **Sample Model:** -----
3. **Manufacturer:** Fuzhou Victory Technology Co., Ltd.
4. **Manufacturer Address:** 11# YiJing Garden, Fufei RD., Fuzhou, Fujian, China
5. **Suggest Use and Restricted:** Recording GPS data

CLIENT INFORMATION

1. **Applicant:** Fuzhou Victory Technology Co., Ltd.
2. **Applicant Address:** 11# YiJing Garden, Fufei RD., Fuzhou, Fujian, China
3. **Applicant Post Code:** -----

TEST INFORMATION:

1. **Applicant No:** 170114753
2. **Test Items and Request:** MATERIAL SAFETY DATA SHEETS
3. **Date of Receipt:** Jan.16, 2017
4. **Date of Test:** Jan.16-19, 2017

SUMMARY:

As per request, the contents and formats of the MSDS are prepared in accordance with European Commission Directives 67/548/EEC, 1999/45/EC, Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and Regulation (EU) No 453/2010, and is provided per attached.

REMARKS:

1. The MSDS is prepared based on the information provided by client.
2. This sample is likely to be classified as article with substances not intended to be released and is out of scope of a MSDS as set out in Regulation (EC) No 1907/2006. This MSDS is generated for client's reference only.

Signed for Shenzhen TOBY

Justin Zhang
Manager





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Section 1 - Identification of the substance /preparation and of the company/ undertaking

Identification of the preparation	:	Rechargeable Li-Polymer Battery
Company Identification	:	Fuzhou Victory Technology Co., Ltd.
Company Address	:	11# YiJing Garden, Fufei RD., Fuzhou, Fujian, China
Tel	:	0086-15060079099
Fax	:	0086-0591-87566766
Emergency Contact No.	:	0086-15060079099
e-mail	:	13688063@qq.com

Section 2 - Hazards Identification

Hazard description: Harmful! Do not short circuit, recharge, puncture, incinerate, crush, immerse, force discharge or expose to temperatures above the declared operating temperature range of the product. Risk of fire or explosion.

Under normal conditions of use, the electrode materials and liquid electrolyte they contain are not exposed to the outside, provided the battery integrity is maintained and seals remain intact. Risk of exposure only in case of abuse (mechanical, thermal, electrical) which leads to the activation of safety valves and/or the rupture of the battery containers. Electrolyte leakage, electrode materials reaction with moisture/water or battery vent/explosion/fire may follow, depending upon the circumstances.

Section 3 - Composition/ Information on Ingredients

Hazardous Ingredients (Chemical Name)	Concentration or concentration ranges (%)	CAS Number
Lithium Cobalt Oxide	36.2%	12190-79-3
Graphite(Super-p)	1.0%	7782-42-5
Carboxymethylcellulose	1.0%	9004-32-4
Polyvinylidene Fluoride	1.0%	24937-79-9
Graphite	22.0%	7782-42-5
Ethylene Carbonate		96-49-1
Dimethyl Carbonate	16.8%	616-38-6
Lithium Hexafluorophosphate		21324-40-3
Copper	11.0	7440-50-8
Aluminum	6.0%	7429-90-5
Polypropylene	2.7%	9003-07-0



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Poly Ethylene	1.3%	9002-88-4
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Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

Section 4 - First Aid Measures

Inhalation	Remove from exposure, rest and keep warm. In severe cases obtain medical attention.
Skin contact	Wash off skin thoroughly with water. Remove contaminated clothing and wash before reuse. In severe cases obtain medical attention.
Eye contact	Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention.
Ingestion	Wash out mouth thoroughly with water and give plenty of water to drink. Obtain medical attention.
Further treatment	All cases of eye contamination, persistent skin irritation and casualties who have swallowed this substance or been affected by breathing its vapours should be seen by a Doctor.

Section 5 - Fire-Fighting Measures

Hazardous Combustion Products	When burned, hazardous products of combustion including fume of carbon monoxide and carbon dioxide can occur.
Extinguishing Media	Water, carbon dioxide, dry chemical or foam.
Basic Fire Fighting Procedures	Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 - Accidental Release Measures

Accidental	If the battery breakage and electrolyte leakage, evacuate personnel until the smoke cleared. Wipe with a cloth and placed in steel drums into the bag inside. If the battery is hot, away from the scene firstly, cool the battery, so that the steam dissipated. Adequate ventilation. Avoid skin or eye contact steam.
Waste treatment	The battery Should discharge completely, the waste



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	batteries will be turned over in the relevant sector, and all waste must refer to the United Nations, national, local regulations for disposal. Reference to national or federal Environmental Protection Agency EPA.
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Section 7 - Handling and Storage

Handling and Storage	Prohibit mechanical or electrical damage battery. Stored in a dry, cool and ventilated environment, to avoid temperature changes or high temperature. Keep away from heat, avoid prolonged sun exposure. Against short circuit, overcharge, forced discharge, or in a fire. Battery disassembly, crush, fire or high temperatures can cause fire or explosion, prohibit short-circuit or error operation.
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Section 8 - Exposure Controls/ Personal Protection

Respiratory protection	If the battery leaks, the need for full ventilation.
Hand Protection	Under normal use, do not.
Personal Protection	Under normal use, do not.
Other protection	Under normal use, do not.
If the battery leaks, must wear the following protection products.	
Respiratory protection	In all fire situations, use self-contained breathing apparatus.
Hand protection	In the event of leakage wear gloves.
Eye protection	Safety glasses are recommended during handling.
Other	In the event of leakage, wear chemical apron.

Section 9 - Physical and Chemical Properties

Physical State	Form: Rectangle
	Color: Silvery
	Odour: Odourless
Change in condition:	
pH, with indication of the	Not applicable



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concentration	
Melting point/freezing point	Not available.
Boiling Point, initial boiling point and Boiling range	Not available.
Flash Point	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapor Pressure	Not applicable
Vapor Density(Air = 1)	Not applicable
Density/relative density	Not available.
Solubility in Water	Dissoluble in water.
n-octanol/water partition coefficient	Not applicable
Auto-ignition temperature	130°C
Decomposition temperature	Not available.
Odour threshold	Not available.
Evaporation rate	Not available.
Flammability (soil, gas)	Not available.
Viscosity	Not applicable

Section 10 - Stability and Reactivity

Stability	Product is stable under conditions described in Section 7. Hazardous reactions may occur under some specific conditions.
Conditions to avoid	When a battery is exposed to an external short-circuit, crushes, modification, high temperature above 100 degree C, it will be the cause of heat generation and ignition. Avoid to be exposed to direct sunlight and high humidity.
Materials to avoid	Conductive materials, water, seawater, strong oxidizers and strong acids.
Hazardous decomposition products	Acrid or harmful gas is emitted during fire

Section 11 - Toxicological Information

Primary irritant effect	None, unless battery ruptures. In the event of exposure to internal contents, corrosive fumes will be very irritating
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	to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.
Inhalation	Lung irritant.
Skin contact	Skin irritant
Eye contact	Eye irritant.
Ingestion	Tissue damage to throat and gastro-respiratory tract if swallowed.
Medical conditions generally aggravated by exposure	In the event of exposure to internal contents, eczema, skin allergies, lung injuries, asthma and other respiratory disorders may occur.

Section 12 - Ecological Information

Environmental Impact	Proper use and disposal of the battery will not harm the environment. Dispose of the battery, away from water, rain and snow.
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Section 13 - Disposal Considerations

Do not incinerate, or subject battery to temperatures in excess of 100. Such abuse can result in loss of seal, leakage, and/or battery explosion.

Waste disposal must be in accordance with the applicable regulations. Disposal of the lithium battery should be performed by permitted, professional disposal page: firms knowledgeable in state or local requirements of hazardous waste treatment and hazardous waste transportation.

Incineration should never be performed by battery but users, eventually by trained professional in authorized facility with proper gas and fume treatment.

Section 14 - Transport Information

This report applies to by sea, by air and by land;

The Lithium Polymer Battery tested according to the requirements of the UN manual of tests and Criteria, Part III, subsection 38.3;

The Lithium Polymer 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 Lithium Polymer Battery according to Section II/Section IB of PACKING INSTRUCTION 965, or Section II of PACKING INSTRUCTION 966~967 of the 2017 IATA



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Dangerous Goods regulations 58th Edition may be transported and applicable U.S. DOT regulations for the safe transport of Lithium Polymer Battery.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

The package must be handled with care and that a flammability hazard exists if the package is damaged;

Each package must be labeled with a Lithium Polymer Battery handling label or in addition to the Class 9 hazard label.

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.

UN number of lithium battery: UN3480 or UN3481;

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

UN Classification (Transport hazard class): Non dangerous;

Marine pollutant(Y/N): N;

- The International Maritime Dangerous Goods (IMDG) Code.

For lithium-ion batteries by sea, provided that packaging is strong and prevent the products from short-circuit.

UN number of lithium battery: UN3480 or UN3481;

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

UN Classification (Transport hazard class): Non dangerous;

Marine pollutant(Y/N): N;

Special Provision: International maritime dangerous goods code (IMDG) 188, 230, 310, 348, 957;

- The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA

- The Office of Hazardous Materials Safety within the US Department of Transportations' (DOT) Research and Special Programs Administration (RSPA).

Section 15 - Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

_____ Hazardous _____ v _____ Non-hazardous

Section 16 - Other Information

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The information above is believed to be accurate and represents the best information currently available to us. However, concorde 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 sheets 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.

Appearance Photo of Sample



***** (END OF REPORT) *****