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Issue Date: 2023-01-06

# **MSDS**

| Applicant             | : | Shenzhen XushengWeiye Electronic Technology Co., Ltd.   |
|-----------------------|---|---|
| Address               | : | 4th floor, building B1, area A, fuhai industrial zone, fuyong town, bao 'an district, shenzhen. |
| Product Name          | : | Lithium ion Battery   |
| Model No.             | : | 18650 2500mAh   |
| Product Specification | : | XSWY  |
| Manufacturer          | : | 3.6V/2500mAh/9.0Wh  |
| Address               | : | Shenzhen XushengWeiye Electronic Technology Co., Ltd.   |
| Sample Received Date  | : | 2022-12-30  |
| Completed Date        | : | 2023-01-06  |

Prepare by: Anne

Alex Li

Checked by:Allie

Miya THEN ans

Shenzhen ZCT Technology Co., Ltd.

 Add: 3/F.,Building 5, Hongsheng Industrial Zone, Bao'an Road, Xixiang Street,Bao'an District, Shenzhen, Guangdong, China.
 Tell: 400-669-6965 Tell: 86-755-23702323
 Url: www.renzhengjiance.com Email: info@renzhengjiance.com



# Material Safety Data Sheet

# Section 1 - Chemical Product and Company Identification

# **Product Identification**

| Product Name    | Lithium ion Battery   |
|-----------------|---|
| Model No.       | 18650 2500mAh   |
| Applicant       | Shenzhen XushengWeiye Electronic Technology Co., Ltd.   |
| Address         | 4th floor, building B1, area A, fuhai industrial zone, fuyong town, bao 'an district, shenzhen. |
| Manufacturer    | Shenzhen XushengWeiye Electronic Technology Co., Ltd.   |
| Address         | 4th floor, building B1, area A, fuhai industrial zone, fuyong town, bao 'an district, shenzhen. |
| Contact Person: | Miss Pan  |
| E-mail:         | 13510375316   |
| TEL             | N/A   |

# Section 2- Hazard identification

| Classification of the   | Acute toxicity - Oral, Category 3                                   |
|-------------------------|---|
| substance or mixture:   | Skin corrosion, Category 1A   |
|                         | Serious eye damage, Category 1                                      |
|                         | Specific target organ toxicity – repeated exposure, Category 1      |
| GHS label elements,     | Pictogram:  |
| including precautionary |   |
| statements:             |   |
|                         | Signal word: Danger   |
|                         | Hazard statement(s):  |
|                         | H301 Toxic if swallowed   |
|                         | H314 Causes severe skin burns and eye damage                        |
|                         | H372 Causes damage to organs through prolonged or repeated exposure |
|                         | H361 Suspected of damaging fertility or the unborn child            |





| GHS label elements,     | Precautionary statement(s):   |
|-------------------------|---|
| including precautionary | Prevention  |
| statements:             | P201 Obtain special instructions before use.                                    |
|                         | P202 Do not handle until all safety precautions have been read and understood.  |
|                         | P264 Wash thoroughly after handling.  |
|                         | P270 Do not eat, drink or smoke when using this product.                        |
|                         | P260 Do not breathe dust/fume/gas/mist/vapours/spray.                           |
|                         | P280 Wear protective gloves/protective clothing/eye protection/face protection. |
|                         | Response  |
|                         | P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/                |
|                         | P321 Specific treatment (see on this label).                                    |
|                         | P330 Rinse mouth.   |
|                         | P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.               |
|                         | P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated      |
|                         | clothing. Rinse skin with water [or shower].                                    |
|                         | P363 Wash contaminated clothing before reuse.                                   |
|                         | P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for       |
|                         | breathing.  |
|                         | P310 Immediately call a POISON CENTER/doctor/                                   |
|                         | P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes.     |
|                         | Remove contact lenses, if present and easy to do. Continue rinsing.             |
|                         | P314 Get medical advice/attention if you feel unwell.                           |
|                         | P308+P313 IF exposed or concerned: Get medical advice/ attention.               |
|                         | Storage   |
|                         | P405 Store locked up.   |
|                         | Disposal  |
|                         | P501 Dispose of contents/container to local regulations.                        |
|                         | Supplemental Hazard :none   |
| Other hazards which do  | none  |
| not result in           |   |
| classification          |   |

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| Chemical Composition | CAS No.     | Weight(%) |
|----------------------|-------------|-----------|
| LiCoO2               | 12190-79-3  | 30-35     |
| LiMn2O4              | 12057- 17-9 | 21-24     |
| Carbon               | 7440-44-0   | 2-5       |
| LiPF6                | 21324-40-3  | 3-6       |
| (CH2-CF2)n           | 24937-79-9  | 1 1- 15   |
| AI                   | 7429-90-5   | 8- 12     |
| Cu                   | 7440-50-8   | 8- 12     |

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

# Section 4 - First-aid Measures

| General Advice | The chemicals and metals in this product are contained in a sealed can. Exposure     |
|----------------|--|
|                | to the contents will not occur unless the battery leaks, is exposed to high          |
|                | temperatures or is mechanically, physically, or electrically abused.                 |
| Eyes           | If battery is leaking and material contacts the eye, flush thoroughly with copious   |
|                | amounts of running water for 30 minutes. Seek immediate medical advice.              |
| Skin           | If battery is leaking and material contacts the skin, remove any contaminated        |
|                | clothing and flush exposed skin with copious amounts of running water for at least   |
|                | 15 minutes. If irritation, injury or pain persists, seek medical advice.             |
| Inhaled        | If battery is leaking, contents may be irritating to respiratory passages. Move to   |
|                | fresh air. If irritation persists, seek medical advice.                              |
| Swallowed      | If battery is swallowed seek immediate medical advice. Batteries lodged in the       |
|                | esophagus should be removed immediately since leakage, caustic burns and             |
|                | perforation can occur as soon as two hours after ingestion. If mouth area irritation |
|                | or burning has occurred, rinse the mouth and surrounding area with tepid water for   |
|                | at least 15 minutes. Do not give ipecac.   |





#### **Section 5 - Fire Fighting Measures**

| Fire and Explosion         | Batteries may burst and release hazardous decomposition products when exposed     |
|----------------------------|---|
| Hazards                    | to a fire situation.  |
| Extinguishing Media        | Use any extinguishing media that is appropriate for the surrounding fire.         |
| Special Fire Fighting      | Firefighters should wear positive pressure self-contained breathing apparatus and |
| Procedures                 | full protective clothing. Fight fire from a distance or protected area. Cool fire |
|                            | exposed batteries to prevent rupture. Use caution when handling fire-exposed      |
|                            | containers (batteries may explode in heat of fire).                               |
| Hazardous                  | Thermal degradation may produce hazardous fumes of lithium and manganese;         |
| <b>Combustion Products</b> | hydrofluoric acid, oxides of carbon and sulfur and other toxic by-products.       |

# Section 6 - Accidental Release Measures

Notify safety personnel of large spills. Irritating vapors and flammable may be released from leaking or ruptured batteries. Eliminate all ignition sources. Evacuate the area and allow the vapors to dissipate. Cleanup personnel should wear appropriate protective clothing to avoid eye and skin contact and inhalation of vapors or fumes. Increase ventilation. Carefully collect batteries and place in an appropriate container for disposal. Remove spilled liquid with absorbent and contain for disposal.

#### Section 7 –Handling And Storage

| Handling | Avoid mechanical or electrical abuse. DO NOT short circuit or install incorrectly. |
|----------|--|
|          | Batteries may explode, pyrolize or vent if disassembled, crushed, recharged or     |
|          | exposed to high temperatures. Install batteries in accordance with equipment       |
|          | instructions. Replace all batteries in equipment at the same time. Do not carry    |
|          | batteries loose in a pocket or bag.  |
| Storage  | Store batteries in a dry place at normal room temperature.                         |

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# Section 8 - Exposure Controls/Personal Protection

| <b>Respiratory Protection</b> | 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.             |
| Ventilation                   | Not necessary under conditions of normal use.                                       |
| Other Protective              | Not necessary under conditions of normal use.                                       |
| <b>Clothing or Equipment</b>  |   |
| Personal Protection is        | Respiratory Protection, Protective Gloves, Protective Clothing and safety glass     |
| recommended for               | with side shields.  |
| venting battery               |   |

#### **Section 9 - Physical and Chemical Properties**

| Appearance         | cylindrical    |
|--------------------|----------------|
| Odour              | Odorlessness   |
| Color              | green          |
| рН                 | Not applicable |
| Flash Point        | Not applicable |
| Flammability       | Not applicable |
| Relative density   | Not applicable |
| Solubility (water) | Not applicable |
| Solubility (other) | Not applicable |

#### Section 10 - Stability and Reactivity

| Stability               | This product is stable.   |
|-------------------------|---|
| Incompatibility/Conditi | Contents are incompatible with strong oxidizing agents. Do not heat, crush, |
| ons to Avoid            | disassemble, short circuit or recharge.                                     |
| Hazardous               | Thermal decomposition may produce hazardous fumes of lithium and            |
| Decomposition           | manganese; hydrofluoric acid, oxides of carbon and sulfur and other toxic   |
| Products                | by-products.  |
| Hazardous               | Will not occur  |
| Polymerization          |   |





| U                |   |
|------------------|---|
| Potential Health | The chemicals and metals in this product are contained in a sealed can. Exposure  |
| Effects          | to the contents will not occur unless the battery leaks, is exposed to high       |
|                  | temperatures or is mechanically, physically, or electrically abused.              |
| Eye Contact      | Contact with battery contents may cause irritation.                               |
| Skin Contact     | Contact with battery contents may cause irritation.                               |
| Inhalation       | Inhalation of vapors or fumes released due to heat or a large number of leaking   |
|                  | batteries may cause respiratory and eye irritation.                               |
| Ingestion        | Swallowing is not anticipated for larger batteries due to battery size. Smaller   |
|                  | batteries may be swallowed. If battery is swallowed, seek immediate medical       |
|                  | advice. Batteries lodged in the esophagus should be removed immediately since     |
|                  | leakage, caustic burns and perforation can occur as soon as two hours after       |
|                  | ingestion. Irritation to the internal/external mouth areas, may occur following   |
|                  | exposure to a leaking battery.  |
| Chronic Effects  | The chemicals in this product are contained in a sealed can and exposure does not |
|                  | occur during normal handling and use. No chronic effects would be expected from   |
|                  | handling a leaking battery.   |
| Target Organs    | Skin, eyes and respiratory system.  |
| Carcinogenicity  | None of the components of this product are listed as carcinogens by the EU        |
|                  | Directive on the classification and labeling of substances.                       |

#### Section 11 - Toxicological Information

# Section 12 - Ecological Information

No ecotoxicity data is available. This product is not expected to present an environmental hazard.

#### Section 13 - Disposal

Do not incinerate or subject cells to temperature in excess of 80 °C.Dispose of in accordance with local regulations.





#### **Section 14 - Transport Information**

All lithium, lithium ion and lithium polymer cells and batteries must be tested in accordance with the "UN Manual of Tests and Criteria, Part III, Subsection 38.3 2017.

The 64<sup>th</sup> edition of the IATA Dangerous Goods Regulations incorporates all amendments made by the ICAO Dangerous Goods Panel in developing the content of the 2023 edition of the ICAO Technical Instructions as well as changes adopted by the IATA Dangerous Goods Board.

Their regulations are based on the UN Recommendations. The UN Recommendations require that lithium ion cells and batteries shall be manufactured under a quality management program and this requirement is adopted by IMDG Code and ICAO TI/IATA DGR.

The following list is intended to assist the user to identify the main changes introduced in this edition and must not be considered an exhaustive listing. The changes have been prefaced by the section or subsection in which the change occurs.

# Shipping Name (UN Number):

Lithium ion batteries (UN3480)

Lithium ion batteries packed with equipment (UN3481)

Lithium ion batteries contained in equipment (UN3481)

Hazard Classification: Class 9 (Miscellaneous)

# Organizations governing the transport of lithium batteries are as follows,

| Area          | Method                    | Organization | Packing Instruction or<br>Special Provision                |
|---------------|---------------------------|--------------|--|
| International | Air                       | IATA, ICAO   | Section II of 64 <sup>th</sup> Edition,2023,<br>PI 965-967 |
| International | Maritime                  | IMO          | SP 188   |
| U.S.A         | Air, Rail, Road, Maritime | DOT          | 49 CFR Section 173.185                                     |

Cells and batteries must be packed in inner packaging that completely encloses the cell or battery. 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 a short circuit.

Each consignment must be accompanied with a document such as an air waybill with an indication that:

• the package contains lithium ion cells or batteries;

• the package must be handled with care, and that a flammability hazard exists if the package isdamaged;

• special procedures should be followed in the event the package is damaged, to include inspection and repacking if necessary; and





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a telephone number for additional information.
 Each package must be labelled with a lithium battery handling label;
 Any person preparing or offering cells or batteries for transport must receive adequate instruction on these requirements commensurate with their responsibilities.

# Section 15 - Regulatory Information

Special requirement be according to the local regulations.

《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 TitleIII(302/311/312/313) 》 (SARA)
《Resource Conservation and Recovery Act》 (RCRA)
《Safety Drinking Water Act》 (CWA)
《California Proposition 65》

«Code of Federal Regulations» (CFR)

# Section 16 - Other Information

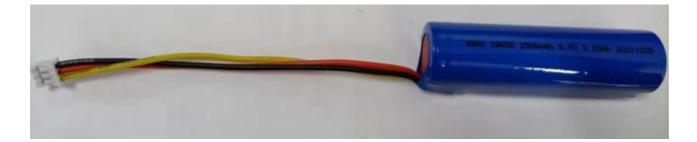
| Note | This Sheet is provided as technical information only. The information and recommendations       |  |
|------|---|--|
|      | set forth are made in good faith and believed to be accurate as of the date of preparation.     |  |
|      | Precise Testing & Certification (Guangdong) Co., Ltd.(PTC). makes no warranty, expressed        |  |
|      | or implied, with respect to this information and disclaims all liabilities from reliance on it. |  |

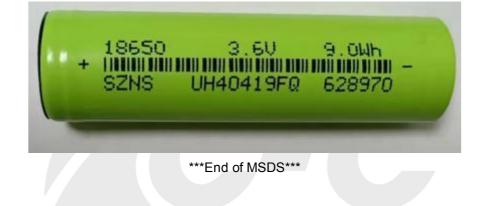




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Photo(s) of Sample:





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 Tell: 400-669-6965 Tell: 86-755-23702323
 Url: www.renzhengjiance.com Email: info@renzhengjiance.com



Shenzhen ZCT Technology Co., Ltd.