



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 1 of 9

**Applicant** : Shen Zhen QianLang energy technology co.,Ltd  
**Address** : 7th Floor, Building E, Xinyuan Industrial Park, Guanshui Dashui, Longhua New District, Shenzhen  
**Product Name** : Lithium Ion Battery  
**Model No.** : 401015  
**Product Specification** : --  
**Manufacturer** : Shen Zhen QianLang energy technology co.,Ltd  
**Address** : 7th Floor, Building E, Xinyuan Industrial Park, Guanshui Dashui, Longhua New District, Shenzhen  
**Sample Received Date** : Jan.18, 2022  
**Completed Date** : Jan.22, 2022

Signed for and on Behalf of PTC

Miya Ning / Technical Manger

Precise Testing & Certification (Guangdong) Co., Ltd.



This report is issued according to the general clauses in [www.ptc-testing.com](http://www.ptc-testing.com) by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted. The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**  
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 2 of 9


## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

#### Product Identification

Product Name	Lithium Ion Battery
Model No.	401015
Applicant	Shen Zhen QianLang energy technology co.,Ltd
Address	7th Floor, Building E, Xinyuan Industrial Park, Guanshui Dashui, Longhua New District, Shenzhen
Manufacturer	Shen Zhen QianLang energy technology co.,Ltd
Address	7th Floor, Building E, Xinyuan Industrial Park, Guanshui Dashui, Longhua New District, Shenzhen
Contact Person:	Yang ying
E-mail:	1105935264@qq.com
TEL	0755-89201779

### Section 2- Hazard identification

Classification of the substance or mixture:	Acute toxicity - Oral, Category 3 Skin corrosion, Category 1A Serious eye damage, Category 1 Specific target organ toxicity – repeated exposure, Category 1
GHS label elements, including precautionary statements:	<b>Pictogram:</b>  <b>Signal word:</b> Danger <b>Hazard statement(s):</b> 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

This report is issued according to the general clauses in [www.ptc-testing.com](http://www.ptc-testing.com) by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted. The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**  
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 3 of 9

<b>GHS label elements, including precautionary statements:</b>	<b>Precautionary statement(s):</b> <b>Prevention</b> 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. <b>Response</b> 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. <b>Storage</b> P405 Store locked up. <b>Disposal</b> P501 Dispose of contents/container to ... <b>Supplemental Hazard</b> :none
<b>Other hazards which do not result in classification</b>	none

This report is issued according to the general clauses in www.ptc-testing.com by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted. The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**  
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 4 of 9

## Section 3 - Composition/Information on Ingredients

Chemical Composition	CAS No.	EC No.	Weight(%)
LiNixCoyMnzO2	12190-79-3	235-362-0	36
Aluminum Foil (AL)	7429-90-5	231-072-3	11
Copper Foil (Cu)	7440-50-8	231-159-6	14.5
Graphite(C)	7782-42-5	231-955-3	14
Nickel	7440-02-0	231-111-4	3.75
Lithium hexafluorophosphate(LiPF6)	21324-40-3	244-334-7	0.75
Dimethyl carbonate	616-38-6	210-478-4	6
Carbonte,methyl ethyl	623-53-0	433-480-9	6
Ethylene carbonate	96-49-1	202-510-0	8

## Section 4 - First-aid Measures

<b>General Advice</b>	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.
<b>Eyes</b>	If battery is leaking and material contacts the eye, flush thoroughly with copious amounts of running water for 30 minutes. Seek immediate medical advice.
<b>Skin</b>	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.
<b>Inhaled</b>	If battery is leaking, contents may be irritating to respiratory passages. Move to fresh air. If irritation persists, seek medical advice.
<b>Swallowed</b>	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.

This report is issued according to the general clauses in [www.ptc-testing.com](http://www.ptc-testing.com) by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted. The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**  
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 5 of 9

## Section 5 - Fire Fighting Measures

<b>Fire and Explosion Hazards</b>	Batteries may burst and release hazardous decomposition products when exposed to a fire situation.
<b>Extinguishing Media</b>	Use any extinguishing media that is appropriate for the surrounding fire.
<b>Special Fire Fighting Procedures</b>	Firefighters should wear positive pressure self-contained breathing apparatus and 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).
<b>Hazardous Combustion Products</b>	Thermal degradation may produce hazardous fumes of lithium and manganese; 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. Clean-up 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

<b>Handling</b>	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.
<b>Storage</b>	Store batteries in a dry place at normal room temperature.

This report is issued according to the general clauses in [www.ptc-testing.com](http://www.ptc-testing.com) by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted.  
The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**  
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 6 of 9

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

## Section 9 - Physical and Chemical Properties

<b>Appearance</b>	--
<b>Odour</b>	--
<b>Color</b>	--
<b>pH</b>	Not applicable
<b>Flash Point</b>	Not applicable
<b>Flammability</b>	Not applicable
<b>Relative density</b>	Not applicable
<b>Solubility (water)</b>	Not applicable
<b>Solubility (other)</b>	Not applicable

## Section 10 - Stability and Reactivity

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

This report is issued according to the general clauses in [www.ptc-testing.com](http://www.ptc-testing.com) by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted.  
The report could not be copied without permission of the company.



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 7 of 9

## Section 11 - Toxicological Information

<b>Potential Health Effects</b>	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.
<b>Eye Contact</b>	Contact with battery contents may cause irritation.
<b>Skin Contact</b>	Contact with battery contents may cause irritation.
<b>Inhalation</b>	Inhalation of vapors or fumes released due to heat or a large number of leaking batteries may cause respiratory and eye irritation.
<b>Ingestion</b>	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.
<b>Chronic Effects</b>	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.
<b>Target Organs</b>	Skin, eyes and respiratory system.
<b>Carcinogenicity</b>	None of the components of this product are listed as carcinogens by the EU Directive on the classification and labeling of substances.

## 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.

This report is issued according to the general clauses in [www.ptc-testing.com](http://www.ptc-testing.com) by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted. The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**  
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)



# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 8 of 9

## 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 63<sup>rd</sup> edition of the IATA Dangerous Goods Regulations incorporates all amendments made by the ICAO Dangerous Goods Panel in developing the content of the 2022 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 Special Provision
International	Air	IATA, ICAO	Section II of 63 <sup>rd</sup> Edition,2022, 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 is damaged;
- special procedures should be followed in the event the package is damaged, to include inspection and repacking if necessary; and
- a telephone number for additional information.

This report is issued according to the general clauses in www.ptc-testing.com by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted. The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)





# MSDS

Report No.:PTC21123103901C-EN01

Issue Date:Jan.22, 2022

Page 9 of 9

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)
- 《2020 Lithium battery guidance document, revision 1》

## Section 16 - Other Information

<b>Note</b>	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.
-------------	--

This report is issued according to the general clauses in [www.ptc-testing.com](http://www.ptc-testing.com) by PTC. Responsibility, guarantee and law restriction are defined in the general service clauses. The report is only responsible for the submitted sample(s) except as otherwise noted. The report could not be copied without permission of the company.

**Precise Testing & Certification (Guangdong) Co., Ltd.(PTC)**  
Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China.  
Tel: 86-769-38808222 Fax: 86-769-38826111 [http:// www.ptc-testing.com](http://www.ptc-testing.com)