

# MSDS Report

Description : Li-ion Polymer Battery

Model No : 113465

Client : Shenzhen Sinoming technology co.,Ltd

Client Address: R14th201,The 2th yard,Fruit street,Renming bei road,East gate road,Luohu area,Shenzhen



Laboratory ..... : **Shenzhen Green Seeding Testing Technology Co., Ltd.**

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*Chenry Chen*

## Material Safety Data Sheet

### Section 1-Chemical Product and Company Identification

#### Product Identification

**Lithium Ion Prismatic Cell/Battery:**

113465\_Lithium Ion Polymer Battery-

Norminal Voltage : 3.7 V

Norminal Capacity : 2850mAh

Equivalent Lithium content : 10.55-Wh

Testing Period : August 6 , 2015\_To August 15, 2015

This MSDS was prepared by Shenzhen Green Seeding Testing Technology Co., Ltd.

Item Number: GST150817001S

Referenced documents: ISO 11014:2009 Safety data sheet for chemical products;

#### Manufacturer

Shenzhen Sinoming technology co.,Ltd

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### Section 2-Composition/Information on Ingredients

Chemical Composition	Molecular Formula	Weight%	CAS No	OSHA(PEL)	ACGIH(TLV)
Lithium Cobalt Oxide	LiCoO <sub>2</sub>	35	12190-79-3	N/A	N/A
Aluminum Foil	Al	10	7429-90-5	N/A	N/A
Graphite powder	C	25	7782-42-5	N/A	N/A
COPPER	Cu	15	7440-50-8	N/A	N/A
LiPF <sub>6</sub>	LiPF <sub>6</sub>	12	21324-40-3	N/A	N/A
Other	N/A	3	N/A	N/A	N/A

### Section 3-Hazards Identification

#### Health Hazards (Acute and Chronic)

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. Contact of electrolyte and extruded lithium with skin and eyes should be avoided.

#### Sign/Symptoms of Exposure

A shorted battery can cause thermal and chemical burns upon contact with the skin. May be a reproductive hazard.

## Section 4-First-aid Measures

### Eye

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

### Skin

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

### Inhalation

Remove from exposure and move to fresh air immediately. Use oxygen if available.

### Ingestion

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

## Section 5-Fire Fighting Measures

**Flash Point:** N/A.

**Auto-Ignition Temperature:** N/A.

**Extinguishing Media:** Water, CO<sub>2</sub>.

### Special Fire-Fighting Procedures

Self-contained breathing apparatus.

### Unusual Fire and Explosion Hazards

Cell may vent when subjected to excessive heat-exposing battery contents.

### Hazardous Combustion Products

Carbon monoxide, carbon dioxide, lithium oxide fumes.

## Section 6-Accidental Release Measures

### Steps to be Taken in case Material is Released or Spilled

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

### Waste Disposal Method

It is recommended to discharge the battery to the end, to use up the metal lithium inside the battery, and to bury the discharged battery in soil.

## Section 7-Handling and Storage

The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.

Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

### Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided.

Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

#### Other Precautions

The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

## Section 8-Exposure Controls/Personal Protection

#### 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.

#### Ventilation

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.

## Section 9-Physical and Chemical Properties

Nominal Voltage	: 3.7V
Rated Capacity	: 2850mAh
Electric Energy	: 10.55Wh

**Appearance characters:** Silvery, prismatic, odorless, solid battery.

**Chemical Uses:** Digital electronic products.

## Section 10- Stability and Reactivity

#### Stability

Stable

#### Conditions to Avoid

Heating, mechanical abuse and electrical abuse.

#### Hazardous Decomposition Products

N/A.

#### Hazardous Polymerization

N/A.

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.

## Section 11- Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened.

Exposure to internal contents, the corrosive fumes will be very irritating to skin, eyes and mucous membranes.

Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation. Irritation

## Section 12- Ecological Information

General note:	Water hazard class 1(Self-assessment): slightly hazardous for water. 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 impace/ecotoxicity	Not Available
Mobility in soil	Not Available
Persistence and Degradability	Not Available
Bioaccumulation potential	Not Available
Other Adverse Effects	Not Available

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

## Section 13-Disposal Considerations

### Appropriate Method of Disposal of Substance or Preparation

If waste Li-ion batteries are still fully charged or only partially discharged, they can be considered a reactive hazardous waste because of significant amount of not reaction, or unconsumed lithium remaining in the spent battery. The batteries must be neutralized through an approved secondary treatment facility prior to disposal as a hazardous waste. Recycling of battery can be done in authorized facility, through licensed waste carrier. Use a professional disposal firm for disposal of mass quantities of undischarged Li-ion batteries.

## Section 14-Transport Information

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

The Li-ion Battery according to Section II of PACKING INSTRUCTION 965-967 of the 2015 IATA Dangerous Goods regulations 56th Edition may be transported. and applicable U.S. DOT regulations for the safe transport of Li-ion Polymer Battery. Polymer Li-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;

Cell and batteries offered for transport must be packed in inner packaging's that completely enclose the cell or battery; to provide protection from damage or compression to the batteries, the inner packaging's must be placed in a strong rigid outer packaging;

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;

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;

UN Proper shipping name/Description (technical name): Lithium ion batteries;

Marine pollutant(Y/N): N;

- The International Maritime Dangerous Goods (IMDG) Code (2012 Edition).

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

UN number of lithium battery: UN3481;

UN Proper shipping name/Description (technical name): Lithium ion batteries

Marine pollutant(Y/N): Y;

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

### Law Information

《Dangerous Goods Regulation》

《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 Substances 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 III (302/311/312/313)》 (SARA)

《Resource Conservation and Recovery Act》 (RCRA)

《Safety Drinking Water Act》 (CWA)

《California Proposition 65》

《Code of Federal Regulations》 (CFR)

In accordance with all Federal, State and Local laws.

## Section 16-Other Information

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 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.

\*\*\*\*\*The End\*\*\*\*\*

# GS Testing