



## Safety Data Sheets

**Name of Goods:** Li-Polymer Battery

**Commissioner:** Li-Fun Technology Co., LTD.

**Dongguan UTL Electronic Technology Co., Ltd.**

## Safety Data Sheet (SDSs)

<b>Name of goods</b>	Li-Polymer Battery	
<b>Mode</b>	602035-02	
<b>Type</b>	3.8V, 521mAh, 1.97Wh	
<b>Commissioned by</b>	Li-Fun Technology Co., LTD.	
<b>Commissioner address</b>	No.3 Building, Zopoise S & T Park, Xinma Industrial Park, Golden Dragon Road, Tianyuan District, Zhuzhou City, Hunan Provice, P.R. China	
<b>Manufacturer</b>	Li-Fun Technology Co., LTD.	
<b>Manufacturer address</b>	No.3 Building, Zopoise S & T Park, Xinma Industrial Park, Golden Dragon Road, Tianyuan District, Zhuzhou City, Hunan Provice, P.R. China	
<b>Factory</b>	Li-Fun Technology Co., LTD.	
<b>Factory address</b>	No.3 Building, Zopoise S & T Park, Xinma Industrial Park, Golden Dragon Road, Tianyuan District, Zhuzhou City, Hunan Provice, P.R. China	
<b>Inspection according to</b>	OSHA GHS 《A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals》 IATA DGR 《Dangerous Goods Regulations》 IMO IMDG CODE 《INTERNATIONAL MARITIME Dangerous Goods CODE》	
	Receiving date: 2017-05-31	Date of issue: 2017-06-02

Approved by:



Reviewed by:

Tested by:

Dongguan UTL Electronic Technology Co., Ltd.

1F, Hengzheng Bldg, North Road of Station, Nancheng District, Dongguan, Guangdong, China

Tel: +86-769-3893 3228 Fax: +86-769-3893 3229 E-mail: sales@gdutl.com

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### Product Identifier

Product name: Li-Polymer Battery  
 Model: 602035-02  
 3.8V, 521mAh, 1.97Wh

### Other means of identification

Synonyms: None

### Recommended use of the chemical and restrictions on use

Recommended Use: LITHIUM ION BATTERIES  
 Uses advised against: No information available

### Details of the supplier of the safety data sheet

Supplier Name: Li-Fun Technology Co., LTD.  
 Supplier Address: No.3 Building, Zopoise S & T Park, Xinma Industrial Park, Golden Dragon Road, Tianyuan District, Zhuzhou City, Hunan Province, P.R. China  
 Supplier Phone Number: Phone: 86-073128163666  
 Fax: 86-073128163777  
 Supplier Email: Ycfu@lifuntech.com  
 Emergency telephone number  
 Company Emergency Phone Number: 86-073128163666


## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Skin corrosion/irritation	Category 1 Sub-category
Serous eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1

**GHS Label elements, including precautionary statements****Emergency Overview**

<b>Signal word</b>	<b>Danger</b>
<b>Hazard Statements</b>	
Causes severe skin burns and eye damage	
May cause an allergic skin reaction	
May cause cancer	
Causes damage to organs through prolonged or repeated exposure	
	
This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance. This is a battery. In case of rupture: the above hazards exist.	
<b>Appearance</b> No information available	<b>Physical state</b> Solid
<b>Odor</b> No information available	

**Precautionary Statements-prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Do not eat, drink or smoke when using this product

**Precautionary Statements-Response**

- Immediately call a POISON CENTER or doctor/physician
- Specific treatment (see supplemental first aid instructions on this label)

**Eyes**

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

**Skin**

- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- If skin irritation or rash occurs: Get medical advice/attention

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in position comfortable for breathing Immediately call a POISON CENTER or doctor/physician

**Ingestion**

IF SEALLOWED: Rinse mouth. DO NOT induce vomiting

**Precautionary Statements- Storage**

Store locked up

**Precautionary Statements-Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Unknown Toxicity**

20% of the mixture consists of ingredient(s) of unknown toxicity

**Other information**

May be harmful if swallowed

May be harmful in contact with skin

Very toxic to aquatic life with long lasting effects

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

**Interactions with Other Chemicals**

No information available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Common Chemical Name	Chemical Formula	Concentration (%)	CAS Number
Lithium Cobalt Oxide	LiCoO <sub>2</sub>	41.6	12190-79-3
Polyvinylidene fluoride	(C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> ) <sub>n</sub>	0.9	24937-79-9
Aluminum foil	Al	5.8	7429-90-5
Graphite powder	C <sub>24</sub> X <sub>12</sub>	22.1	7782-42-5
Styrene-butadiene rubber	(C <sub>8</sub> H <sub>8</sub> .C <sub>4</sub> H <sub>6</sub> ) <sub>x</sub>	0.54	61789-96-6
Carboxymethyl cellulose	--	0.26	9004-32-4
Copper	Cu	10.6	7440-50-8
Nickel	Ni	0.4	7440-02-0
Lithium Hexafluorophosphate	LiPF <sub>6</sub>	17.8	21324-40-3

### 4. FIRST-AID MEASURES

#### First aid measures

#### General Advice

First aid is upon rupture of sealed battery

#### Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Seek immediate medical attention/advice.

#### Skin Contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. Seek immediate medical attention/advice.

#### Inhalation

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth- to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary

edema may occur. Get medical attention immediately if symptoms occur.

**Ingestion**

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

**Self-protection of the first aider**

Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

**Most Important Symptoms/Effects, both acute and delayed****Most Important Symptoms and Effects**

Burning sensation. Itching. Rashes. Hives. Coughing and/ or wheezing.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician**

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high plus pressure. May cause sensitization in susceptible persons. Treat symptomatically.

**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media**

CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific Hazards Arising from the Chemical**

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact.

**Hazardous Combustion Products**

Carbon oxides.

**Explosion Data****Sensitivity to Mechanical Impact**      None.**Sensitivity to Static Discharge**      None.**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal Precautions**      Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Other Information**      Refer to protective measures listed in Sections 7 and 8.

**Environmental Precautions**

**Environmental precautions**      Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

**Methods and material for containment and cleaning up**

**Methods for Containment**      Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning up**      Pick up and transfer to properly labelled containers.

**7. HANDLING AND STORAGE****Precautions for safe handling**

**Handling**      In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with



adequate ventilation and in closed systems. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

#### **Incompatible Products.**

Acids. Bases. Oxidizing agent.

## **8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### **Control parameters**

#### **Exposure Guidelines**

<b>Chemical name</b>	<b>ACGIH TLV</b>	<b>OSHA PEL</b>	<b>NIOSH IDLH</b>
Lithium Cobalt Oxide(LiCoO <sub>2</sub> ) 12190-79-3	TWA: 0.02 mg/m <sup>3</sup>	-	
Carbon black 1333-86-4	TWA: 3 mg/m <sup>3</sup> inhalable	TWA: 3.5mg/m <sup>3</sup> (vacated)TWA: 3.5 mg/m <sup>3</sup>	IDLH: 1750 mg/m <sup>3</sup> TWA: 3.5 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup> Carbon black in presence of Polycyclic aromatic hydrocarbons PAH

Phosphate(1-), hexafluoro-, lithium 21324-40-3	TWA: 2.5 mg/m <sup>3</sup> F	TWA: 2.5 mg/m <sup>3</sup> F TWA: 2.5 mg/m <sup>3</sup> dust (vacated)TWA: 2.5 mg/m <sup>3</sup>	
Copper 7440-50-8	TWA: 0.2 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> dust and mist	TWA:0.1 mg/m <sup>3</sup> fume TWA: 1 mg/m <sup>3</sup> dust and mist (vacated)TWA: 0.1mg/m <sup>3</sup> Cu dust, fume, mist	IDLH: 100mg/m <sup>3</sup> dust, fume and mist TWA: 1mg/m <sup>3</sup> dust and mist TWA: 0.1 mg/m <sup>3</sup> fume

Aluminum 7429-90-5	TWA: 1 mg/m <sup>3</sup> respirable fraction	TWA: 15 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated)TWA: 15 mg/m <sup>3</sup> total dust (vacated)TWA:5 mg/m <sup>3</sup> respirable fraction(vacated) TWA: 5 mg/m <sup>3</sup> Al Aluminum	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Nickel 7440-02-0	TWA: 1.5 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup> (vacated)TWA: 1 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> TWA: 0.015 mg/m <sup>3</sup>

ACGIH TLV: American Conference of Governmental Industrial Hygienists- Threshold Limit Value OSHA PEL: Occupational Safety and Health Administration – Permissible Exposure Limits NIOSH Immediately Dangerous to Life or Health

**Other Exposure Guidelines** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

### Appropriate engineering controls

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Face protection shield

**Skin and Body protection** Wear protection gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**Hygiene Measures** Handle in accordance with good Industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

**Physical state** Solid

**Appearance** No information available **Odor** No information available

**Color** No information available **Odor Threshold** No information available

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
<b>pH</b>	No data available	None known
<b>Melting / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	No data available	None known
<b>Evaporation Rate</b>	No data available	None known
<b>Flammability(solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit</b>	No data available	None known
<b>Lower flammability limit</b>	No data available	None known
<b>Flammability pressure</b>	No data available	None known
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Specific Gravity</b>	No data available	None known
<b>Water Solubility</b>	No data available	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient: n-octanol/water</b>	No data available	None known
<b>Autoignition temperature</b>	No data available	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known
<b>Explosive properties</b>	No data available	None known
<b>Oxidizing properties</b>	No data available	None known

### Other Information

**Softening Point** No data available

**VOC Content (%)** No data available

**Particle Size** No data available

**Particle Size Distribution**

## 10. STABILITY AND REACTIVITY

### Reactivity

No data available.

### Chemical stability

Stable under recommended storage and handling conditions.

### Possibility of Hazardous Reactions

None under normal processing.

### Conditions to avoid

Exposure to air or moisture over prolonged periods.

### Incompatible materials

Acids. Bases. Oxidizing agent.

### Hazardous Decomposition Products

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routed of exposure

#### **Product Information**

Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture

#### **Inhalation**

Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

**Eye contact**

Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

**Skin contact**

Specific test data for the substance or mixture is not available. Corrosive. (based on components). Cause burns.

**Ingestion**

Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation
Carbon black 1333-86-4	> 15400 mg/kg(Rat)	>3 g/kg (Rabbit)	-
Nickel 7440-02-0	>90000 mg/kg(Rat)	-	-

**Information on toxicological effects****Symptoms**

Erythema (skin redness). Burning. May cause blindness. Coughing and/ wheezing. Itching. Rashes. Hives

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Sensitization**

May cause sensitization by skin contact.

**Mutagenic Effects**

No information available.

**Carinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
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Lithium Cobalt Oxide (LiCoO <sub>2</sub> ) 12190-79-3	A3	Group 2B		X
Carbon black 1333-86-4	A3	Group 2B		X
Nickel 7440-02-0		Group 1 Group 2B	Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A3 – Animal Carcinogen

IARC (International Agency for Research on Cancer )

Group 1 – Carcinogenic to Humans

Group 2B – Possibly Carcinogenic to Humans

NTP (national Toxicology Program)

Reasonably Anticipated – Reasonably Anticipated to be a Human Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X – Present

### Reproductive toxicity

No information available

### STOT – single exposure

No information available

Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910. 1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

### STOT – repeated exposure

### Chronic Toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Contains a known or suspected carcinogen. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse liver effects.

### Target Organ Effects

Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Kidney. Liver. Lungs. Lymphatic System. Nasal cavities

### Aspiration Hazard

No information available

## Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

### **ATEmix (oral)**

4,000.00 mg/kg

### **ATEmix (dermal)**

2,400.00 mg/kg (ATE)

## **12. Ecological information**

### Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Carbon black 1333-86-4				24h EC50:>5600mg/L
Copper 7440-50-8	96h EC50: 0.031-0.054mg/L (Pseudokirchneriella subcapitata) 72h EC50: 0.0426-0.0535 mg/L (Pseudokirchneriella subcapitata)	96h LC50: 0.0068-0.0156 mg/L (Pimephales promelas) 96h LC50:=1.25 mg/L (Lepomis macrochirus) 96h LC50:=0.052 mg/L (Oncorhynchus mykiss) 96h LC50:=0.2mg/L(pimephales promelas) 96h LC50:<0.3 mg/L(pimephales promelas) 96h LC50:=0.112mg/L(pimephales promelas) 96h LC50:=0.112 mg/L(poecilia reticulata) 96h LC50:=0.3 mg/L)Cyprinus carpio) 96h LC50:=0.8 mg/L (Cyprinus carpio)		48h EC50:=0.03mg/L

Nickel 7440-02-0	72h EC50:=0.18mg/L (Pseudokirchneriella subcapitata) 96h EC50:0.174-0.311 mg/L(Pseudokirchneriella subcapitata)	96h LC50:>100mg/L (brachydanio rerio) 96h LC50:=1.3mg/L(Cyp rinus carpio) 96h LC50:=10.4 mg/L (Cyprinus carpio)	48h EC50:>100 mg/L 48h EC50:=1 mg/L
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**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available.

**13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Disposal methods**

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261 ). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements

**Contaminated Packaging**

Dispose of contents/containers in accordance with local regulations.

**California Hazardous Waste Codes 141**

This product contains one or more substances that are listed with the State of California as a hazardous waste

Chemical name	California Hazardous Waste
Lithium Cobalt Oxide(LiCoO2) 12190-79-3	Toxic
Copper 7440-90-5	Toxic
Aluminum 7429-90-5	Ignitable powder
Nickel 7440-02-0	Toxic powder Ignitable powder



## 14. TRANSPORT INFORMATION

**Note:**

The transportation of primary lithium cells and batteries is regulated by the international Civil Aviation Organization, International Air Transport Association, International Maritime Dangerous Goods Code and the US Department of Transportation. The batteries must meet the following criteria for shipment: 1. Air shipment must meet the requirements listed in Special Provision A45 of the International Air Transport Association Dangerous Goods Regulations. 2. Meet the requirements for the US Department of Transportation listed in 49 CFR 173.185.3. The transport of primary lithium batteries is prohibited aboard passenger aircraft. Refer to the Federal Register December 15, 2004 (Hazardous Materials; Prohibited on the Transportation of Primary Lithium Batteries and Cells Aboard Passenger Aircraft; Final Rule)

Lithium batteries shipped as "Lithium batteries", "Lithium batteries packed with equipment", or "Lithium batteries contained in equipment" may not be classified as "Dangerous Goods", when shipped in accordance with "special provision A45 of IATA-DGR" or "special provision 188 of IMO-IMDG Code"

<b><u>DOT</u></b>	NOT REGULATED
<b>Proper Shipping Name</b>	NOT REGULATED
<b>Hazard Class</b>	N/A
<b>Emergency Response Guide Number</b>	147
<b><u>TDG</u></b>	Not regulated
<b><u>MEX</u></b>	Not regulated
<b><u>ICAO</u></b>	Not regulated
<b><u>IATA</u></b>	Not regulated
<b>Proper Shipping Name</b>	NOT REGULATED
<b>Hazard Class</b>	N/A
<b><u>IMDG/IMO</u></b>	Not regulated
<b>Hazard Class</b>	N/A
<b>EmS-No.</b>	F-A, S-I

<b><u>RID</u></b>	Not regulated
<b><u>ADR</u></b>	Not regulated
<b><u>ADN</u></b>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	Complies
<b>DSL</b>	All components are listed either on the DSL or NDSL
<b>TSCA</b> – United States Toxic Substance Control Act Section 8(b) Inventory	
<b>DSL/NDSL</b> – Canadian Domestic Substance List/Non-Domestic Substances List	

### US Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical name	CAS No	Weight-%	SARA 313-Threshold Values %
Lithium Cobalt Oxide (LiCoO <sub>2</sub> )- 12190-3	12190-79-3	30-60	0.1
Copper – 7440-50-8	7440-50-8	7-13	1.0
Aluminum – 7429-90-5	7429-90-5	5-10	1.0
Nickel – 7440-02-0	7440-02-0	1-5	0.1

#### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	No
<b>Chronic Health Hazard</b>	No
<b>Fire Hazard</b>	No
<b>Sudden release of pressure hazard</b>	No

**CWA (Clean Water Act)**

This product contains the following substance which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical name	CWA-Reportable Quantities	CWA-Toxic Pollutants	CWA-Priority Pollutants	CWA-Hazardous Substances
Copper 7440-50-8		X	X	
Nickel 7440-02-0		X	X	

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40CFR 302)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Copper 7440-50-8	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ
Nickel 7440-02-0	100 lb		RQ 100 lb final RQ RQ 45.4 kg final RQ

**US State Regulations****California Proposition 65**

This product contains the following Propositions 65 chemicals

Chemical name	California Proposition 65
Carbon black – 1333-86-4	Carcinogen
Nickel – 7440-02-0	Carcinogen

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode island	Illinois
Lithium Cobalt Oxide (LiCoO <sub>2</sub> ) 12190-79-3	X		X	X	X
Carbon black	X	X	X		X

Dongguan UTL Electronic Technology Co., Ltd.

1F, Hengzheng Bldg, North Road of Station, Nancheng District, Dongguan, Guangdong, China

Tel:+86-769-3893 3228 Fax:+86-769-3893 3229 E-mail: sales@gdutl.com

1333-86-4					
Copper 7440-50-8	X	X	X	X	X
Aluminum 7429-90-5	X	X	X	X	
Nickel 7440-02-0	X	X	X	X	X

### International Regulations

#### Mexico

#### National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Carbon black 1333-86-4(10-30)		Mexico: TWA 3.5 mg/m <sup>3</sup> Mexico: STEL 7 mg/m <sup>3</sup>
Copper 7440-50-8(7-13)		Mexico: TWA =1 mg/m <sup>3</sup> Mexico: TWA =0.2 mg/m <sup>3</sup> Mexico: STEL =2mg/m <sup>3</sup>
Aluminum 7429-90-5(5-10)		Mexico: TWA =10 mg/m <sup>3</sup>
Nickel 7440-02-0(1-5)		Mexico: TWA1 mg/m <sup>3</sup>

Mexico – Occupational Exposure Limits – Carcinogens

#### Canada

#### WHMIS Hazard Class

Non-controlled

## 16. OTHER INFORMATION

NFPA	Health Hazards 1	Flammability 0	Instability 0	Physical and Chemical Hazards-
NFPA	Health Hazards 1	Flammability 0	Instability 0	Physical and
HMIS	Health Hazards 0	Flammability 0	Instability 0	Personal Protection
				X

**Prepared By** Product Stewardship 23 British American Blvd. Latham, Ny 12110 1-800-572-6501

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### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

Photos



Fig.1 Overall view I of battery

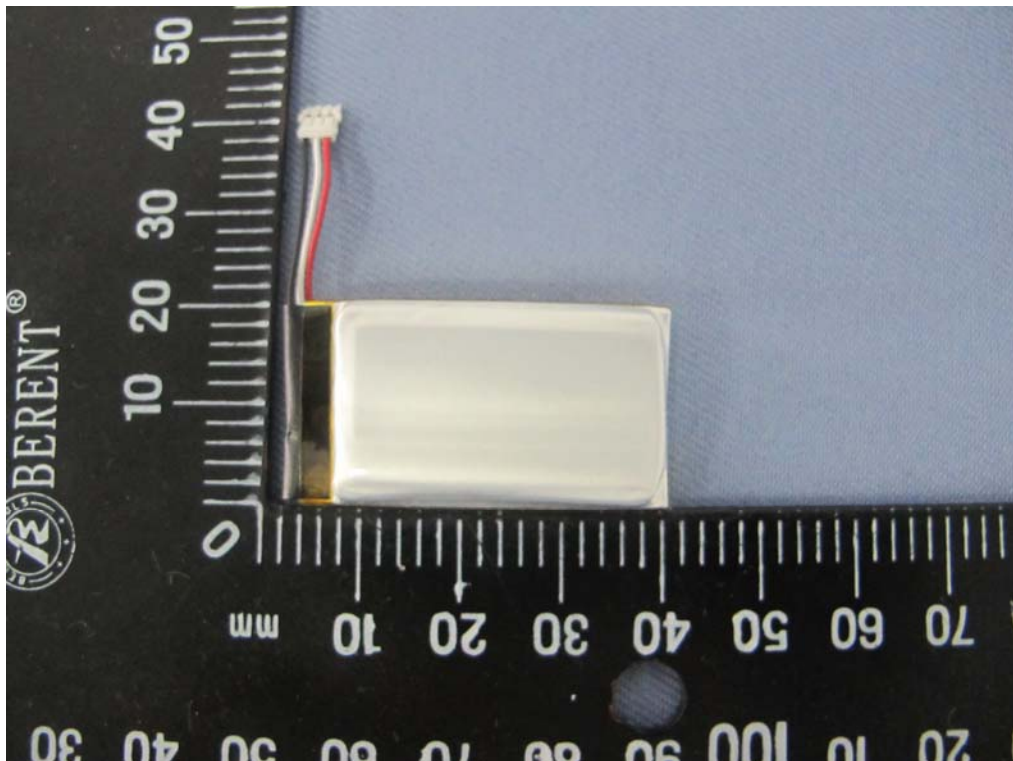


Fig.2 Overall view II of battery