Report No.: FJJBY20160628SDS02

SAFETY DATA SHEET

Product Name: Li-Ion Battery

Type/Model: ICR 18650 3.7V 2000mA 7.4Wh

Revision Date: Jun. 29, 2016

SECTION1:Identification of the substance/mixture and of the company/undertaking

1.1ProductIdentifier

Name of Product: Lithium-ion rechargeable pack battery

15.6**Other means of identification**

ProductModels:ICR18650
NominalVoltage:3.7V
Nominal capacity:2000mAh
NominalPower:7.4Wh
Weight:49g

15.7**Recommendeduseofthe chemical and restriction on use Recommended Use: Rechargeable Li-ion Battery**
Restriction on Use: No information available

15.8**Information Of Company:**

Company Name: Fujian Jinbo yi Energy technology co., LTD

Address: Nanping Wuyi New Area Industrial Park Tong tour operators three F-01 Hao, Fujian, China

Zip code:353000

Contact person: Zhang Ye

Tel:+86-599-6902222

E-mail: szrjzy@126.com

1.5EmergencyTelephone

+86-13510371390

SECTION2.Hazard(s) Identification

2.1Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard(29CFR1910.1200).This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured.The hazards indicated are for a ruptured battery.

Acute toxicity –Oral	Category4
Acute toxicity-Dermal	Category4
Skin corrosion/irritation	Category1Sub-categoryC
Serious eye damage/eye irritation	Category1
Skin sensitization	Category1
Carcinogenicity	Category2
Specific target organ toxicity(repeated exposure)	Category1

15.2 Label elements

- **Signal Word Danger**
- **Hazard Statements** Harmful if swallowed Toxic if swallowed

  Harmful in contact with skin

Cause severe skin burns and eye damage
May cause an allergic or reaction
May cause cancer
Cause damage to organs
May cause respiratory irritation

2.2.3Symbol

This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. 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.

2.3PrecautionaryStatements

2.3.1PrecautionaryStatements –Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.
Do not breath dust/fume/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Wear protective gloves

13.1 .2PrecautionaryStatements –

Response

If exposed or connected: Get medical advice/attention. Specific treatment(see supplemental first aid/instruction on this label).

Skin

If on skin: wash with plenty of soap and water. Take off contaminated clothing and water Before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye

If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present And easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation

If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position Comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion

If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if Feel unwell.

2.3.3PrecautionaryStatements –Storage

Store locked up

2.3.4PrecautionaryStatements –Disposal

Dispose of contents/container to an approved waste disposal plant.

13.2 Hazards not otherwise classified

(HNOC)

Not applicable

13.3 Unknown Toxicity

10% of the mixture consists of ingredient(s) of unknown toxicity.

13.4 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13.5 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

SECTION 3.Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh %
Cobalt lithium manganese nickel oxide	$Li\ Ni_xCo_yMn_z\ O_2$	182442-95-1	40-45
Graphite Power	C	7782-42-5	28-35
Lithium hexafluorophosphate	$LiPF_6$	21324-40-3	12-15
Polypropylene	$(\ C_3H_6$	9003-07-0	1-5
Aluminum	Al	7429-90-5	2-10
Copper	Cu	7440-50-8	5-10

4. First Aid Measures

11.1 General

Advice

First aid is Applicable only in the case of cell rupture.

- **Eye contact**

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eyes wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

- **Skin Contact**

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin Irritation or allergic reaction see a physician. May cause an allergic skin reaction.

- **Inhalation of Vented Gas**

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 substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value 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.

4.1.4Ingestion

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.

4.1.5Self-protection of the first aider

Ensure that medical personnel are aware of the material (s) involved. Take precaution 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 personnel protective equipment as required. Wear personnel protective clothing (see section8).

11.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives, Coughing.

11.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

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 pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

SECTION5.Fire–Fighting Measures

8.1Suitable Extinguishing Media

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

8.2 Unsuitable Extinguishing Media

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

8.3Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/ or explosion do not breathe fumes. May cause sensitization by in halation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Carbon oxides.

8.4 Explosion Data

Sensitivity to Mechanical Impact :No.
Sensitivity to Static Discharge: No.

8.5Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH (approved or equivalent) and full protective gear. Move containers from fire area if you can do It without risk.

SECTION6. Accidental ReleaseMeasures

7.1 **Persona precautions, protective equipment and emergency procedures**

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.

7.2 **Environmental Precautions**

Refer to protective measures listed in Sections 7 and 8.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.

7.3 **Methodsfor containment**

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

7.4 **Methods for cleaning up**

Pick up and transfer to properly labeled containers.

SECTION7.Handling and Storage

6.1 **Precaution for safe handling**

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

6.2 **Conditions for safes torage, including any incompatibilities**

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases.

SECTION 8. Exposure Controls/Personal Protection

5.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Graphite 7782-42-5	TWA:2 mg/m³ respirable fraction all forms except graphite fibers	TWA:15 mg/m³total dust synthetic TWA:5mg/m³ respirable fraction synthetic(vacated) TWA:2.5 mg/m3 respirable Dust natural(vacated) TWA:10 mg/m3 total dust synthetic(vacated) TWA:5 mg/m3 respirable fraction synthetic TWA:15 mppcf natural	IDLH:1250 mg/m³ TWA2.5 mg/m³(resp)
Cobalt lithium manganese nickel oxide 182442-95-1	TWA:0.02mg/m³	-	
Lithium hexafluorophosphate 21324-40-3	TWA:2.5mg/m³F	TWA:2.5mg/m³F TWA:2.5mg/m³ dust(vacated) TWA:2.5mg/m³	-
Copper	TWA:0.2 mg/m3fume	TWA:0.1 mg/m3fume	IDLH:100 mg/m3dust,

7440-50-8	TWA:1mg/m3 Cu dust and mist	TWA:1 mg/m3 dustand mist (vacated)TWA:0.1mg/m3 Cu dust, fume, mist	Fume and mist TWA:1 mg/m3dustand mist TWA:0.1 mg/m3fume
Alumin um 7429-90-5	TWA:1mg/m^3	TWA：15mg/m^3total dust TWA:5mg/m^3 respirable fraction (vacated) TWA:15mg/m^3total dust(vacated) TWA:5mg/m^3respirable fraction	IDLH:10mg/m^3 Total dust TWA:5mg/m^3 Respirable dust

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

Other Exposure Guidelines:

Vacated limits revoked by the court of Appeals decision in AFL-CLOv.OSHA,965F,2d 962(11th Cir.,1992)See section 15 for national exposure control parameters.

5.2Appropriate engineering controls

Engineering Measures:

Showers、Eyewash stations、Ventilation systems

5.3Individual protection measures, such as personal protective equipment

Respiratory protection: No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles).None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

SECTION9. Physical and Chemical Properties

Physical State: Solid

Color: Blue

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

Flammability(Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient: n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

SECTION10.Stability and Reactivity

Reactivity:
No data available
Chemical stability:
Stable under recommended storage conditions.
Possibility of Hazardous Reactions:
None under normal processing.
Hazardous Polymerization:
Hazardous polymerization dose not occur.
Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.
Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases.
Hazardous decomposition products:
Carbon oxides

SECTION11.Toxicological Information

4.1 Information on likely routes 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(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion 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).Corrosion 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. Corrosion (based on components).Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

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. Maybe fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	OralLD50	DermalLD50	InhalationLC50
Graphite 7782-42-5	> 10000mg/kg (Rat)	-	-

4.2 Information on toxicological effects

Symptoms:
Erythema(skin redness).May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling Of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

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

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin

contact. May cause sensitization by inhalation.

Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Cobalt lithium manganese nickel oxide 182442-95-1	A3	Group2B		X

ACGIH(American Conference of Governmental Industrial Hygienists)
A3-AnimalCarcinogen
IARC(International Agency for research on Cancer)
Group2B- Possibly Carcinogenic to humans
NTP(National Toxicology Program)Reasonably Anticipated-reasonably anticipated to be a Human Carcinogenic.
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.

STOT-repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29CFR 1910.1200),this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract (GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

4.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1of the GHS document.
ATE mix(oral): 2900mg/kg

SECTION12. Ecological Information

Ecotoxicity : Water hazard class1(Self-assessment): slightly hazardous for water.

Chemical name	Toxicity to Aglae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna(Water Flea)
Cooper 7440-50-8	96h EC50:0.31-0.045mg/l	96h LC50:0.068-0.0156mg/L (pimephales promelas)		48h EC50:=0.03 mg

/l

(pseudokirchneriella subcapitata)	96h LC50:=0.112mg/L(Poecilia reticulate)
72h EC50:0.426-0.0535mg/l (pseudokirchneriella subcapitata)	96h LC50=0.3mg/L(Cyprinusmarpio) 96h LC50=0.8mg/L((Cyprinusmarpio) 96h LC50=1.25mg/L(Lepomismacrochirus)96h LC50=0.052mg/L(Oncorhynchus mykiss)96h LC50=0.2mg/L(Pimephalespromelas)96h LC50: < 0.3mg/L(Pimephalespromelas)

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

SECTION13.Disposal Considerations

2.3 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. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and 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
Copper7440-50-8	Toxic
Aluminum 7429-90-5	Ignitable powder
Cobalt lithium manganese nickel oxide 182442-95-1	Toxic

SECTION14.Transportation Information

According to Packing Instruction 965-970 of IATA DGR 57th Edition for transportation, the

Special provision 188 of IMDG. The batteries should be securely packed and protected against short-circuits.Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles. Don’ t put the goods together with oxidizer and chief food chemicals. The transport vehicle should prevent exposure, rain and high temperature. For stopovers, the Vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, Power and fire sources. Under the condition of road transportation, the driver should drive in Accordance with regulated route, don’ t stopover in the residential area and congested area. Forbid to use wooden, cement for bulk transport:

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"PI965-967 section II of IATA-DGR "or" special provision 188 of IMO-IMDG Code"

DOT:NOT REGULATED

Proper Shipping Name: NON REGULATED

Emergency Response Guide Number: 147

Hazard Class: N/A

ICAO: Not regulated

IATA:

- Proper Shipping Name: Lithium ion batteries packed with equipment

Hazard Class: N/A

UN Number: Not restricted

Packaging requirement: According to IATA DGR 57th Edition (Effective 1 January-31December 2016), PACKING INSTRUCTION 966 of section II for transportation.

- Proper Shipping Name: Lithium ion batteries

UNNumber:UN3480

Hazard Class:9

Packaging requirement: According to IATA DGR 57th Edition(Effective 1 January-31December 2016), PACKINGIN STRUCTION 965 of section IB for transportation.

IMDG/IMO: Not regulated

Proper Shipping Name: NON REGULATED

Hazard Class: N/A

EmsNo.:F-A,S-1

RID: Not regulated

ADR: Not regulated

AND: Not regulated

SECTION15.Regulatory information

15.1InternationalInventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA–United State Toxic Substance Control Act Section8(b)Inventory
DSL/NDSL–Canadian Domestic Substance List/Non-Domestic Substance List

2.2 US Federal Regulations

SARA313:Section313ofTitle 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 (%)	SARA313-Threshold
Cobalt lithium manganese nickel oxide	182442-95-1	40-45	0.1
Copper	7440-50-8	5-10	1.0
Aluminum	7429-90-5	2-10	1.0

2.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

2.4 CWA (Clean Water Act)

This product contain the following substances 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
Copper7440-50-8		X	X	
Cobalt lithium manganese nickel oxide182442-95-1		x	x	

15.5CERCLA

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

Chemical Name	Hazardous Substances	Extremely Hazardous Substances RQs	RQ
Copper 7440-50-8	5000lb		RQ5000lbfinal RQ RQ2270kgfinal RQ

1.2 US State Regulations

CaliforniaProposition65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
Cobalt lithium manganese nickel oxide 182442-95-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Graphite7782-42-5	×	×	×		
Cobalt lithium manganese nickel oxide			×	×	×
Copper7440-50-8	×	×	×	×	×
Aluminum7429-90-5	×	×	×	×	

1.3 **International Regulations**

Canada
WHMIS Hazard Class
Non-controlled

SECTION16.OtherInformation

According standard :

GB/T 16483-2008 Safety data sheet for chemical products Content and order of sections

ISO11014:2009(E) Safety data sheet for chemical products–Content and order of sections

2012OSHA Hazard Communication Standard (29CFR1910.1200)

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 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 material used in combination with any other materials or in any process, unless specified in the test.