1. IDENTIFICATION

Product Identifier

Name of Product: Lithium-ion Rechargeable Cell

Other means of identification

Product Models: FST 18650-2000mAh
Nominal Voltage: 3.6V
Nominal capacity: 2000mAh
Nominal power: 7.2Wh
Weight: 44g

Recommended use of the chemical and restriction on use

Recommended Use: Rechargeable Li-ion Battery
Restriction On Use: No information available

Information Of Supplier:

Company Name: Far East First New Energy Co., Ltd.
Address: Economic Development Zone, Yichun, Jiangxi 336000, P.R. China
Zip code: 336000
Contact person: Zhugen Liu
Tel: +86-18879558287
E-mail: 134250@600869.com

Emergency Telephone

+86-795-3666188

2. Hazard(s) Identification

Classification:

This is a battery. In case of rupture:.

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements:

Signal Word : Danger

Hazard statements :





This is a battery. In case of rupture:.
Causes skin irritation
Causes serious eye irritation
Suspected of causing cancer
Causes damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention:

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not breathe dust/fume/gas/mist/vapors/spray
Do not eat, drink or smoke when using this product

Precautionary Statements - Response:

IF exposed or concerned: Get medical advice/attention
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 If eye irritation persists: Get medical advice/attention

Skin:

IF ON SKIN: Wash with plenty of water and soap
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash it before reuse

Precautionary Statements - Storage:

Store locked up

Precautionary Statements - Disposal:

Dispose of contents/container to an approved waste disposal plant

Other information

Very toxic to aquatic life with long lasting effects

Unknown acute toxicity :

30.9 % of the mixture consists of ingredient(s) of unknown toxicity
30.9 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
30.9 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
30.9 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. Composition/ Information on Ingredients

Chemical Name	CAS No.	Weigh%
Cobalt lithium manganese nickel oxide	182442-95-1	20.02
Lithium manganese oxide (LiMn2O4)	12057-17-9	12.27
Carbon black	1333-86-4	0.52
Cellulose, carboxymethyl ether	9000-11-7	0.3
Dimethyl carbonate	616-38-6	6.92
Carbonate, methyl ethyl	623-53-0	0.5
Phosphate(1-), hexafluoro-, lithium	21324-40-3	1.7
Rubber, butadiene styrene	61789-96-6	0.65
Graphite	7782-42-5	15.48
1-Propene, 1,1,2,3,3,3-hexafluoro-, polymer with 1,1-difluoroethene	9011-17-0	1
Methyl pyrrolidone	872-50-4	17.82
Copper	7440-50-8	6.04
Steel	12597-69-2	13.13
Polypropylene	9003-07-0	0.25

Aluminum	7429-90-5	2.5
Polyethylene terephthalate	25038-59-9	0.9

4. First Aid Measures

General Advice

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

Skin Contact:

Washing immediately with plenty of water and soap for at least 15 minutes.In the case of skin irritation or allergic reaction see a physician.

Eye contact:

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

Inhalation of Vented Gas:

Remove to fresh air. If symptoms persist, call a physician. Get medical attention immediately if symptoms occur.

Ingestion:

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Call a physician or poison control center immediately.

Most important symptoms and effects, both acute and delayed

Contact with internal components may cause allergic skin sensitizations (rash) and irritate eyes, nose, throat, respiratory system. Cobalt and cobalt compounds are considered to be possible human carcinogen(s).

Indication of any immediate medical attention and special treatment needed

No information available

5. Fire –Fighting Measures

Suitable Extinguishing Media

Usefoam , dry powder or dry sand, CO_2 as appropriate.

Unsuitable Extinguishing Media:

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

Specific Hazards Arising from the chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to fire situation. This could result in the release of flammable or corrosion materials.

Hazardous Combustion product:

CO, CO_2, Metals oxides, Irritating fumes.

Protective equipment and precautions for firefighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equipment filtermask(full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gases. Put out the fire in the upwind direction. Remove the container to open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area, dispose the case after the batteries cool and vapors dissipate. Provide maximum ventilation. Avoid contact with skin, eyes or inhalation of vapors.

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

7. Handling and Storage

Precaution for safe handling

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not shirt-circuit batteries use recommended charging time and current.

Conditions for safe storage, 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. If battery is subject to storage for such a long term as more than 3months, it is recommended to recharge the battery periodically.

Incompatible products：Strong acids.Strong oxidizing agent.

8. Exposure Controls/Personal Protection

Control parameters

Not established

Appropriate engineering controls

Under normal conditions(during charge and discharge) release of ingredients does not occur.

Individual protection measures

Respiratory protection:

No personal respiratory protective equipment normally required. In case of inadequate ventilation wear respiratory protection

Eye /face protection:

If splashes are likely to occur, wear safety glasses with side-shields.

Skin protection:

Wear protective clothing to prevent contact

Hand protection:

Wear protective gloves

9. Physical and Chemical Properties

Physical State: Solid

Color: Light green

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

10. Stability and Reactivity

Reactivity:

No data available

Chemical stability:

Stable under recommended storage conditions.

Possibility of Hazardous Reactions:

When heated above 150℃ the risk of rupture occurs. Due to special safety construction, rupture implies controlled release of pressure without ignition

Conditions to avoid:

Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:

Strong acids, strong oxidizing agents.

Hazardous decomposition products:

Under fire conditions, the electrode materials can form carcinogenic cobalt oxides

11. Toxicological Information

Information on likely routes of exposure

Inhalation:

Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

Eye Contact:

Contact with battery electrolyte may cause burns. Eye damage is possible.

Skin Contact:

Contact with battery electrolyte may cause burns and skin irritation.

Ingestion:

Ingestion of battery contents may cause moth, throat and intestinal burns and damage.

Under normal conditions（during charge and discharge）release of ingredients does not occur. If accident release occurs see information in section 2,3, and 4. Swallowing of battery can be harmful.

Call the local Poison Control Centre for advice and follow-up.

Information on toxicological characteristics

Acute toxicity:

No data available.

Skin corrosion/irritation:

The liquid in the battery irritates.

Serious eye damage/ irritation:

The liquid in the battery irritates.

Respiratory sensitization:

The liquid in the battery may cause sensitization to some person.

Skin sensitization:

The liquid in the battery may cause sensitization to some person.

Carcinogenicity:

Cobalt and Cobalt compounds are considered to be possible human carcinogen(s)

Germ Cell Mutagencity:

No data available.

Reproductive Toxicity:

No data available.

STOT-single Exposure:

No data available.

STOT-repeated Exposure:

No data available.

Aspiration Hazard:

No data available.

12. Ecological Information

Ecotoxicity:

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

Persistence and Degradability:

No information available

Bioaccumulation:

No information available

Other adverse effects:

No information available

13. Disposal Considerations

Waste treatment methods

Disposal methods:

Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

14. Transportation Information

According to Packing Instruction 965-967 of IATA DGR 59th Edition for transportation, the special provision 188 of IMDG(inc Amdt38-16). 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 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 stop over 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 "No Dangerous Goods" when shipped in accordance with Packing Instruction 965-967 of IATA-DGR" or "Special provision 188of IMO-IMDG Code".

DOT: NOT REGULATED

Proper Shipping Name: NON REGULATED

Hazard Class: N/A

TDG: Not regulated

MEX: Not regulated

ICAO: Not regulated

IATA: Not regulated

Proper Shipping Name: NON REGULATED

Hazard Class: N/A

IMDG/IMO: Not regulated

Hazard Class: N/A

Ems No.: F-A,S-1

RID: Not regulated

ADR: Not regulated

AND:Not regulated

15. Regulatory information

OSHA hazard communication standard (29 CFR 1910.1200)

_____Hazardous ____√____Non-hazardous

16. Other Information

Preparation and revision

Prepared By: Guangzhou CP-UP Certification Technology Service Co., Ltd.

File No.: FST20180129SDS01-1

Issuing Date : Jan 30-2018

Revision Note :No information available

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.

--- End of SDS ---