

## MATERIAL SAFETY DATA SHEET

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

## PRODUCT IDENTIFICATION

All models manufactured by TENPOWER with capacity less than or equal to 2.5 Ahr.

## MANUFACTURER

JIANGSU TENPOWER LITHIUM CO., LTD

## ADDRESS

JINFENG TOWN, ZHANGJIAGANG CITY, JIANGSU PROV. CHINA

DATE: 2014-04-30

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## 2. COMPOSITION INFORMATION

INGREDIENTS	%	CAS NUMBER
Aluminum Foil	2-10	7429-90-5
Metal Oxide (proprietary)	20-50	Proprietary
Polyvinylidene Fluoride (PVDF)	<5	24937-79-9
Copper Foil	2-10	7440-50-8
Carbon (proprietary)	10-30	7440-44-0
Electrolyte (proprietary)	10-20	Proprietary
Aluminum	5-10	7429-90-5

## 3. HAZARDS IDENTIFICATION

Lithium ion cells are not hazardous when used according to the instructions of the manufacturer under normal conditions. In case of abuse, there is a risk of rupture, fire, heat, or leakage of internal components, which could release hazardous materials.

## SYMPTOMS OF EXPOSURE

## Skin contact

No effect under routine handling and use.

## Skin absorption

No effect under routine handling and use.

## Eye contact

No effect under routine handling and use.

## Inhalation

No effect under routine handling and use.

REPORTED AS CARCINOGEN

Not applicable

#### 4. FIRST AID MEASURES

INHALATION, EYE CONTACT, and SKIN CONTACT: Not a health hazard.

INGESTION

If swallowed, obtain medical attention immediately.

If exposure to internal materials within cell due to damaged outer casing, the following actions are recommended.

INHALATION

Leave area immediately and seek medical attention.

EYE CONTACT

Rinse eyes with water for 15 minutes and seek medical attention.

SKIN CONTACT

Wash area thoroughly with soap and water and seek medical attention.

INGESTION

Drink milk/water and induce vomiting; seek medical attention.

#### 5. FIRE FIGHTING MEASURES

GENERAL HAZARD

Cell is not flammable but internal organic material will burn if the cell is incinerated.

Combustion products include, but are not limited to hydrogen fluoride, carbon monoxide and carbon dioxide.

EXTINGUISHING MEDIA

Use extinguishing media suitable for the materials that are burning.

SPECIAL FIREFIGHTING INSTRUCTIONS

If possible, remove cell(s) from fire fighting area.

If heated above 120°C, cell(s) can explode/vent.

FIREFIGHTING EQUIPMENT

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

### ON LAND

Place material into suitable containers and call local fire/police department.

### IN WATER

If possible, remove from water and call local fire/police department.

## 7. HANDLING AND STORAGE

### HANDLING

No special protective clothing required for handling individual cells.

### STORAGE

Store in cool, dry place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### ENGINEERING CONTROLS

Keep away from heat and open flame.

### PERSONAL PROTECTION

Store in a cool dry place.

Respirator:

Not required during normal operations.  
event of a fire.

SCBA required in the

Eye/face protection:

Gloves:

Foot protection:

Not required beyond safety practices of employer.

Not required for handling of cells.

Steel toed shoes recommended for large container handling.

Product Name: JIANGSU TENPOWER LITHIUM CO., LTD

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Material Safety Data Sheet

State	Solid
Odor	N/A
PH	N/A
Vapor pressure	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

## 10. STABILITY AND REACTIVITY

### REACTIVITY

None

### INCOMPATIBILITIES

None during normal operation.

Avoid exposure to heat, open flame, and corrosives.

### HAZARDOUS DECOMPOSITION PRODUCTS

None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

### CONDITIONS TO AVOID

Avoid exposure to heat and open flame.

Do not puncture, crush or incinerate.

## 11. TOXICOLOGICAL INFORMATION

Cells are not hazardous when used properly. In case of fire or leakage combustion and decomposition products may cause irritation and toxicity to skin, eye and respiratory systems.

Toxicity data of some substance is listed:

Hydrogen fluoride:

Extremely toxic, May be fatal if inhaled or ingested. Readily absorbed through the skin contact may be fatal. Possible mutagen. LCLO: 50 ppm/30m (human beings), LC50: 1276 ppm/1h (rats).

Carbon and graphite:

Slightly hazards in case of skin contact (irritant), ingestion, inhalation, which will cause chronic damage to upper respiratory tract and cardiovascular system.

Copper:

File No./Rev.: MSDS—163/C

Dust may cause respiratory irritation.

LD50: 3.5 mg kg<sup>-1</sup>(mouse).

## 12. ECOLOGICAL INFORMATION

Some materials within the cell are bioaccumulative. Under normal conditions, these materials are contained and pose no risk to persons or the surrounding environment.

## 13. DISPOSAL INFORMATION

Recommended methods for safe and environmentally preferred disposal :

Product (waste from residues)

Do not throw out a used battery cell. Recycle it through the recycling company.

Contaminated packaging

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates, dispose as industrial wastes subject to special control.

RCRA Waste Code:

No regulated

Dispose of according to all federal, state, and local regulations.

## 14. TRANSPORTATION INFORMATION

The following regulations apply to the transport of Lithium Ion cells worldwide:

1)UN Recommendations on the Transport of Dangerous Goods according to which Lithium ion cells are assigned UN ID#3480, Class 9, Packing group II

- 2) International Air Transport Association (IATA) Dangerous Goods Regulations (DGR)
- 3) International Maritime Organization (IMO) International Maritime Dangerous Goods (IMDG) Code
- 4) IATA DGR 55rd Edition for transportation
- 5) Transport fashion: by air, by sea

Lithium ion batteries containing no more than 1.5g/cell and 8g/battery pack equivalent lithium can be shipped as 'non-dangerous goods' providing the cells have passed the required tests according to UN38.3 (UN Manual of Tests and Criteria, Part III, Subsection 38.3).

In this case packing instruction 965-967 of IATA-DGR and special provisions 188 of IMO-IMDG code also apply.

## 15. REGULATORY INFORMATION

For shipping regulations see section 14.

## 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. Jiangsu Tenpower Lithium Co., Ltd. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it

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