

NO: LSCM2016-7

Product Name: BAT-510

Revision Date: 2016-3-31

Compiler: Bu Tong

Checker: Ji Hui

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Tianjin Lishen Battery Co.,Ltd.

SAFETY DATA SHEET

Li-Battery

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: BAT-510 (4900mAh/18.86Wh/3.85V)

Company: Tianjin Lishen Battery Joint-Stock Co. Ltd

Address: 6 Lanyuan Road, Huayuan Hi-Tech Industry Park, TianJin, China.

Email: ct107097@lishen.com.cn

Fax: 86-022-83716661

Emergency Phone: 86-022-83716921

SDS Number: LSCM2016-23

SDS Date: 2016-3-31

SECTION2 HAZARDS IDENTIFICATION

Hazards Identification:

The battery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN 38.3. It is not restricted to IATA 57 revision and IMO 35-10 revision.

Emergency Overview:

Avoid contact and inhalation the electrolyte contained inside the battery.

SECTION3 INFORMATION ON INGREDIENTS

Product name: BAT-510

INGREDIENT	CONCENTRATION	CAS NO.	EC NO.
Aluminum Foil	2-10	7429-90-5	
Metal Oxide (proprietary)	20-50	Confidential	
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	Confidential	
Carboxymethyl Cellulose (CMC)	<2	9085-26-1	
Styrene butadiene rubber (SBR)	<2	9003-55-8	
Aluminum and inert materials	Remainder	N/A	

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If the internal battery materials of an opened battery cell come into contact with the skin, immediately flush with plenty of water.

Eye Exposure:

In case of contact with eye, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Inhalation Exposure:

If potential for exposure to nickel fumes or dusts occurs, remove immediately to fresh air and seek medical attention.

Oral Exposure:

If swallowed, do not induce vomiting. Seek immediate medical attention.

SECTION5 FIRE FIGHTING MEASURES

Extinguishing Media:

Use extinguishing media suitable for the materials that are burning.

Firefighting:

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

SECTION6 ACCIDENTAL RELEASE MEASURES

Procedure of Personal Precaution:

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.

SECTION7 HANDLING AND STORAGE

HANDLING

No special protective clothing required for handling individual cells.

STORAGE

Store in a cool, dry place.

SECTION8 EXPOSURE CONTROL/PPE

Engineering Controls:

Use ventilation equipment if available. Safety shower and eye bath.

Personal Protective Equipment:

Respiratory System: Not necessary under conditions of normal use.

Eyes: Not necessary under conditions of normal use.

Clothing: Wear appropriate protective clothing.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

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

SECTION10 STABILITY AND REACTIVITY

Stability:

Stability during normal operation.

Conditions to Avoid:

Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

Materials to Avoid:

None during normal operation. Avoid exposure to heat, open flame, and corrosives.
Hazardous Polymerization: None
Hazardous Decomposition Products:

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

SECTION11 TOXICOLOGICAL INFORMATION

Toxicity Data:

Not available.

Irritation Data:

This product does not elicit toxicological properties during routine handling and use.

Sensitization:	Teratogenicity:	Reproductive toxicity:	Acute toxicity:
NO	NO	NO	NO

This product does not contain any kinds of the following substances and halogen-type flame retardants including Chlorine and Bromide type harmful flame retardants which are listed in Appendix of TCO documents and relevant international ECO requirements:

Polybromated Biphenyls (PBB)
Polybromated Biphenyl Ethers (PBBE)
Polybromated Biphenyl Oxides (PBB0)
Polybromated Diphenylethers (PBDE)
Polychlorinated Biphenyl (PCB)
Polychlorinated Diphenylethers (PCDE)
Tetrabromphispheol A (TBBPA)

Asbestos, Antimonytrioxide, Dioxine

None of the following substances will be exposed, leaked, or emitted during transportation, storage or any operation and any temperature condition:

Chlorinated Fluorohydrocarbon (FCKW)
Acrylonitrile
Styrol
Phenol
Benzol
Mercury of greater than 0.0001 wt% for alkaline battery
Mercury of greater than 0.0005 wt% for other battery
Lithium content of greater than 0.6g/battery cell
Cadmium, lead, and other harmful heavy metal

And will comply with the regulation of 49 CFR (DOT regulation), International Air Transport Association (IATA), and Deuche Forschungsgemeinschaft (DFG) regarding concentrations of emitted substances.

This product does not contain mercury and lithium-metal.

Mercury content: <

Lithium-metal content: <

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

SECTION12 ECOLOGICAL INFORMATION

No data available.

SECTION13 DISPOSAL CONSIDERATION

Appropriate Method of Disposal of Substance:

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: Nonregulated

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

SECTION14 TRANSPORT INFORMATION

Shipping Name: Lithium ion batteries

Hazard Class: 9*

UN Number: DOT-COC-P2016-REV5-13

Packing Group: II*

Codes and classifications according to:

*International regulations for transport Air IATA-DGR 57th Edition: Section II OF PI965/966/967;

*International regulations for transport Sea IMDG CODE: Special Provision 188;

*National regulations for transport land GB12268-2005

SECTION15 REGULATORY INFORMATION

OSHA hazard communication standard (29 CFR 1910.1200)

 Hazardous ✓ Non-hazardous

SECTION16 OTHER INFORMATION

Date: 2016-1-8

Department: Prepared and Approved By

TianJin Lishen Battery Company

Cell R&D Center

Tel(Fax): 86-022-83716661(86-022-83716921)

Revision: 0

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. We make 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 investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information.