INTERNATIONAL
Limited
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Product: JS1224LIN
Part Number: 6238905

Shida Battery Technology Co.,Ltd

MATERIAL SAFETY DATA SHEET

Product Name:	Lithium-ion Polymer Battery
Type/Model:	7548135TP
Nominal Voltage:	22.2V 88.8Wh
Typical Capacity:	4000mAh
Company:	Shida Battery Technology Co.,Ltd
Address:	30 Xingye Road, Shishan Industrial Park, Nanhai District, Foshan City,Guangdong, P.R.China
Inspection according to	EEC Directive 93/112/EC UN "Recommendations on the TRANSPORT OF DANGEROUS GOODS"
Report No.	MSDS-L202305-001

Compiler: Sun Yehua Reviewer: Yang Tingming

Approver: luo Xinyao Revision Date: Feb, 05, 2023

Material Safety Data Sheet

Reference to ST/SG/AC.10/11/Rev.6/Amend.1(GHS)

Section 1 - Chemical Product and Company Identification

Chemical product identification

Manufacturer: Shida Battery Technology Co.,Ltd

Address: 30 Xingye Road, Shishan Industrial Park, Nanhai District, Foshan City,Guangdong, P.R.China

Tel: 0757-86688555

Fax: 0757-86688199

Post code: 528225

Further Information obtainable from

Emergency telephone:86-0757-86688555

E-mail: luo@shida-batteries.com

Section 2 - Hazards Identification

Emergency overview: 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 below hazards exist.

CAS# 7429-90-5

Classification according to GHS

Specific target organ toxicity, repeated exposure (1) (Lung)

Hazardous to the aquatic environment, long-term hazard (4)

Label elements

Hazard pictogram(s):

Signal word: **Danger**

Hazard statement(s):

H372 Causes damage to organs through prolonged or repeated exposure (Lung)

H413 May cause long lasting harmful effects to aquatic life

Precautionary statement(s):

Prevention:

P260 Do not breathe dust.

P264 Wash skin and clothing thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

Response:

P314 Get medical advice if you feel unwell.

Storage

None.

Disposal:

P501 Contents handling to approved waste treatment plants.

CAS# 7440-50-8

Classification according to GHS

Specific target organ toxicity, single exposure; Respiratory tract irritation (3)

Specific target organ toxicity, repeated exposure (1) (liver)

Hazardous to the aquatic environment, long-term hazard (3)

Label elements

Hazard pictogram(s):

Signal word: Danger

Hazard statement(s):

H335 May cause respiratory irritation

H372 Causes damage to organs through prolonged or repeated exposure (liver)

H412 Harmful to aquatic life with long lasting effects

Precautionary statement(s):

Prevention:

P271 Use only outdoors or in a well-ventilated area.

P260 Do not breathe dust.

P264 Wash skin and clothing thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P273 Avoid release to the environment.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312 Call a POISON CENTER or doctor, if you feel unwell.

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

Disposal:

P501 Contents or container handling to approved waste treatment plants.

Other hazards

Physical and chemical hazards: See Section 10

Human health hazards: See Section 11

Environmental hazards: See Section 12

Section 3 - Composition, Information on Ingredients

Chemical characterization: Mixture

Chemical Composition	CAS No.	EC#	Weight (%)
Lithium Cobalt Oxide	12190-79-3	235-362-0	28~35
Graphite	7782-42-5	231-955-3	14~20
Copper foil	7440-50-8	231-159-6	8~15
Polyvinylidene fluoride resin	24937-79-9	200-867-7	<3
Lithium Hexafluorophosphate	21324-40-3	---	<10
Aluminum	7429-90-5	231-072-3	<3

Section 4 - First Aid Measures

Description of first aid measures

General information No special measures required.

After eye contact

Flush eyes with plenty of water for several minutes while holding eyelids open. Get medical attention if irritation persists.

After skin contact

Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

After inhalation

Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallowing

Do not induce vomiting. Get medical attention.

Personal protective equipment for first-aid responders: No data available.

Most important symptoms/effects, acute and delayed: No data available.

Indication of immediate medical attention and special treatment needed: No data available.

Section 5 - Fire Fighting Measures

Suitable extinguishing media:

Use extinguishing agent suitable for local conditions and the surrounding environment .Such as dry powder , CO_2.

Unsuitable extinguishing media:

No data available.

Special hazards arising from the chemical:

Special hazards arising from the substance or mixture

Battery may burst and release hazardous decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150℃(302℉)), when damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

Specific protective actions for fire-fighters:

Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit.

Section 6 - Accidental Release Measures

Personal precautions

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Protective equipment:

No data available.

Emergency procedures:

Remove ignition sources, evacuate area. Sweep up using a method that does not generate dust. Collect as much of the spilled material as possible, placed the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

Environmental precautions:

Do not allow material to be released to the environment without proper governmental permits.

Methods and materials for containment and cleaning up:

All waste must refer to the United Nations, the national and local regulations for disposal.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

Section 7 - Handling and Storage

Precautions for safe handling

Consumption of food and beverage should be avoided in work areas.

Wash hands with soap and water before eating, drinking.

Ground containers when transferring liquid to prevent static accumulation and discharge.

Information about fire and explosion protection

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles

Store in a cool, dry, well-ventilated place.

Information about storage in one common storage facility

Keep away from heat, avoiding the long time of sunlight.

Further information about storage conditions

Keep container tightly sealed.

Specific and use

No data available.

Section 8 - Exposure Controls, Personal Protection

Control parameters

CAS No.	ACGIH	NIOSH	OSHA
15365-14-7	N/A	N/A	N/A
7782-42-5	TLV-TWA 2mg/m3	REL-TWA 2.5mg/m3	PEL-TWA 15mppcf PEL-TWA 20mppcf
7440-50-8	TLV-TWA 0.2mg/m3 TLV-TWA 1mg/m3	REL-TWA 1mg/m3 REL-TWA 0.1mg/m3	PEL-TWA 0.1mg/m3 PEL-TWA 1mg/m3
24937-79-9	N/A	N/A	N/A
7429-90-5	TLV-TWA 10mg/m3 TLV-TWA 5mg/m3	REL-TWA 2mg/m3 REL-TWA 5mg/m3 REL-TWA 10mg/m3	PEL-TWA 5mg/m3 PEL-TWA 15mg/m3

Appropriate engineering controls:

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Personal protective equipment

Respiratory protection: Wear suitable protective mask in order to reduce the respiratory system. A large number of leakage, wear chemical protective clothing, including self-contained breathing apparatus.

Hand Protection: Wear appropriate protective gloves to reduce skin contact.

Eyes Protection: Wear safety goggles or eye protection combined with respiratory protection.

Skin and Body Protection: Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

Section 9 - Physical and Chemical Properties

Information on basic physical and chemical properties

Colour:	Silver.
Physical State:	Prismatic.
Odour:	Not available
pH:	Not available.
Melting point/freezing point:	Not available.
Initial boiling point and boiling range:	Not available.
Flash Point:	Not available.
Evaporation rate:	Not available.
Flammability (solid, gas):	Not available.
Explosion Limits (vol% in air):	Not available.
Vapour pressure, kPa at 20℃:	Not available.
Vapor density:	Not available.
Density/Relative density (water = 1):	Not available.
Solubility(ies):	Not available.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not available.

Section 10 - Stability and Reactivity

Reactivity: Data not available.

Chemical stability: Stable.

Possibility of hazardous reactions： Data not available.

Conditions to Avoid

Flames, sparks, and other sources of ignition, incompatible materials.

Incompatibilities

Oxidizing agents, acid, base.

Hazardous Combustible Products

Carbon monoxide, carbon dioxide, lithium oxide fumes.

Section 11 - Toxicological Information

Information on toxicological effects

Acute toxicity

CAS No.	LC50/LD50
15365-14-7	No data available.
7782-42-5	No data available.
7440-50-8	No data available.
24937-79-9	No data available.
7429-90-5	No data available.

Skin corrosion/irritation: No data available.

Serious eye damage/irritation: No data available.

Respiratory or Skin sensitization: No data available.

Germ Cell mutagenicity: No data available.

Carcinogenicity: No data available.

Reproductive toxicity: No data available.

Specific target organ toxicity-Single exposure: No data available.

Specific target organ toxicity-Repeated exposure: No data available.

Aspiration hazard: No data available.

Information on the likely routes of exposure: No data available.

Eye: No data available.

Skin: No data available.

Ingestion: No data available.

Inhalation: No data available.

Section 12 - Ecological Information

Ecological Toxicity: No data available.

Persistence and degradability: No data available.

Bioaccumulative Potential: No data available.

Mobility in Soil: No data available.

Other adverse effects: No data available.

Section 13 - Disposal Considerations

Disposal methods:

Recommendation:

Consult state, local or national regulations to ensure proper disposal.

Uncleaned packaging

Recommendation: Disposal must be made according to official regulations.

Section 14 - Transport Information

Not	Lithium ion batteries shipped as “Lithium ion batteries contained in equipment” not be classified as “Dangerous Goods” when shipped in accordance with PI 967 section Ⅱ of IATA-DGR or “special provision 188 of IMDG CODE”
IATA	**Proper Shipping Name :** Lithium ion batteries contained in equipment
	UN Number： UN3481
	Hazard Class： Not Restricted
	Packaging requirement： According to Packing Instructions 967 section Ⅱ of 64th DGR Manual of IATA (2023 edition) for transportation.
IMO：	**Proper Shipping Name :** Lithium ion batteries contained in equipment
	UN Number： UN3481
	Hazard Class： Not Restricted
	Packing Group： Not Restricted
	The goods is not restricted to IMO IMDG Code（Amdt 40-20）according to special provision

Transport Fashion: By air, by sea, by railway, by road.

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

CAS No.	TSCA	IECSC	DSL/NDSL	EINECS/ ELINCS/ NLP
12190-79-3	Listed	Listed	Listed DSL	Listed
7782-42-5	Listed	Listed	Listed DSL	Listed
7429-90-5	Listed	Listed	Listed DSL	Listed
7440-50-8	Listed	Listed	Listed DSL	Listed
24937-79-9	Listed	Listed	Listed DSL	Listed

Section 16 - Additional Information

Modification record:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other Information:

CAS: (Chemical Abstracts Service);

EC: (European Commission);

ACGIH: (American Conference of Governmental Industrial Hygienists);

NIOSH: (US National Institute for Occupational Safety and Health);

OSHA: (US Occupational Safety and Health);

TLV: (Threshold Limit Value)

TWA: (Time Weighted Average);

STEL: (Short Term Exposure Limit);

PEL: (Permissible Exposure Level);

REL: (Recommended Exposure Limit);

PC-STEL: (Permissible concentration-time weighted average);

PC-TWA: (Permissible concentration-short time exposure limit);

LC50: (Lethal concentration, 50 percent kill);

LD50: (Lethal dose, 50 percent kill);

IARC: (International Agency for Research on Cancer);

EC50: (Median effective concentration);

BCF: (Bioconcentration Factor);

BOD: (Biochemical oxygen demand);

NOEC: (No observed effect concentration);

NTP: (US National Toxicology Program);

RTECS: (Registry of Toxic Effects of Chemical Substances);

IATA: (International Air Transport Association);

IMDG: (International Maritime Dangerous Goods);

TDG: (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations);

TOC: (Total Organic Carbon);

TSCA: (Toxic Substances Control Act of USA);

DSL: (the Domestic Substances List of Canada);

NDSL: (the Non-domestic Substances List of Canada)

*****End of report*****