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Pony Testing International Group

Report No.: MLIFH1IU90265716

MSDS Report

Sample Description & Model	Cylinder Li-ion Battery 18650-2200mAh
Applicant	Chongqing Zhongxinwei New Energy Technology Co., Ltd
Address	No. 111, Chuangye Boulevard, Zitong Sub-district, Tongnan District, Chongqing City, P. R. China

No.: MLIFH1IU90265716
Code: x27ag846q

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Material Safety Data Sheet

Reference to ST/SG/AC.10/30/Rev.6 (GHS)

Section 1 - Chemical Product and Company Identification

Chemical product identification

Sample Description: Cylinder Li-ion Battery

Sample Model: 18650-2200mAh

Recommended Uses: N/A

Restrictions on use: N/A

Supplier name: Chongqing Zhongxinwei New Energy Technology Co., Ltd

Address: No. 111, Chuangye Boulevard, Zitong Sub-district, Tongnan District, Chongqing City, P. R. China

Phone number: 023-44590558

FAX: 023-44227990

E-mail: 2234384869@qq.com

Emergency phone number: 023-44590558

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

Substances and mixtures which, in contact with water, emit flammable gases (2, 3)

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):

H261 In contact with water releases flammable gas

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:

P223 Do not allow contact with water.

P231 + P232 Handle and store contents under inert gas, Protect from moisture.

P280 Wear protective gloves, protective clothing, eye protection and face protection.

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:

P302 + P335 + P334 IF ON SKIN: Brush off loose particles from skin and immerse in cool water.

P370 + P378 In case of fire: Use the appropriate media put out the fire.

P314 Get medical advice if you feel unwell.

Storage

P402 + P404 Store in a dry place. Store in a closed container.

Disposal:

P501 Contents handling to approved waste treatment plants.

CAS# 7440-50-8

Classification according to GHS

Sensitisation, skin (1, 1A, 1B)

Specific target organ toxicity, single exposure (1) (digestive system)

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

Label elements

Hazard pictogram(s):



Signal word: Danger

Hazard statement(s):

H317 May cause an allergic skin reaction

H370 Causes damage to organs (digestive system)

H335 May cause respiratory irritation

Precautionary statement(s):

Prevention:

P260 Do not breathe dust, fume.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves, eye protection, face protection.

P264 Wash skin and clothing thoroughly after handling.

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

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

Response:

P302 + P352 IF ON SKIN: Wash with plenty water.

P333 + P313 If skin irritation or rash occurs: Get medical advice.

P321 Specific treatment (See additional emergency instructions).

P362 + P364 Take off contaminated clothing and wash it before reuse.

P308 + P311 IF exposed or concerned: Call a POISON CENTER.

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

P312 Call a POISON CENTER if you feel unwell.

Storage

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

P405 Store locked up.

Disposal:

P501 Contents handling to approved waste treatment plants.

CAS# 1333-86-4

Classification according to GHS

Self-heating substances and mixtures (1)

Carcinogenicity (2)

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

Label elements

Hazard pictogram(s):



Signal word: Danger

Hazard statement(s):

H251 Self-heating; may catch fire

H351 Suspected of causing cancer

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

Precautionary statement(s):

Prevention:

P235 Keep cool.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P280 Wear protective gloves, protective clothing, eye protection and face protection.

P260 Do not breathe dust.

P264 Wash skin and clothing thoroughly after handling.

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

Response:

P308 + P313 IF exposed or concerned: Get medical advice.

P314 Get medical advice if you feel unwell.

Storage

P407 Maintain air gap between stacks or pallets.

P413 Store bulk masses greater than ... kg/...lbs at temperatures not exceeding ...°C/...°F.

P420 Store separately.

P405 Store locked up.

Disposal:

P501 Contents 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 (%)
Cobaltate, lithium	12190-79-3	235-362-0	38-45
Graphite	7782-42-5	231-955-3	19-28
Electrolyte	---	---	10-16
Aluminium	7429-90-5	231-072-3	11-15
Copper	7440-50-8	231-159-6	4-9
Polyvinylidene fluoride resin	24937-79-9	607-458-6	0.1-0.6
Carbon black	1333-86-4	215-609-9	0-0.5

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.

Specific 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
12190-79-3	N/A	N/A	N/A
7782-42-5	TLV-TWA 2mg/m^3	REL-TWA 2.5mg/m^3	PEL-TWA 15mppcf PEL-TWA 20mppcf
7429-90-5	TLV-TWA 1mg/m^3	REL-TWA 2mg/m^3 REL-TWA 5mg/m^3 REL-TWA 10mg/m^3	PEL-TWA 5mg/m^3 PEL-TWA 15mg/m^3
7440-50-8	TLV-TWA 0.2mg/m^3 TLV-TWA 1mg/m^3	REL-TWA 1mg/m^3 REL-TWA 0.1mg/m^3	PEL-TWA 0.1mg/m^3 PEL-TWA 1mg/m^3
24937-79-9	N/A	N/A	N/A
1333-86-4	TLV-TWA 3mg/m^3	REL-TWA 3.5mg/m^3	PEL-TWA 3.5mg/m^3

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:	Green.
Physical State:	Cylindrical.
Odour:	Not available.
Odour threshold:	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.
Other information:	
Voltage	3.7V
Electric capacity	2200mAh
Electric Energy	8.14Wh

Section 10 - Stability and Reactivity

Reactivity: No data available.

Chemical stability: Stable.

Possibility of hazardous reactions: No data available.

Conditions to Avoid: Flames, sparks, and other sources of ignition, incompatible materials.

Incompatibilities materials: Oxidizing agents, acid, base.

Hazardous decomposition products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

Section 11 - Toxicological Information

Acute Toxicity:

CAS No.	LC50/LD50
12190-79-3	No data available.
7782-42-5	No data available.
7429-90-5	No data available.
7440-50-8	No data available.
24937-79-9	No data available.
1333-86-4	LD50 Rat (oral): 15400 mg/kg

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

UN Number	
IATA	UN3480
IMDG	UN3480
Model Regulation	UN3480
UN Proper shipping name	
IATA	Lithium ion batteries
IMDG	LITHIUM ION BATTERIES
Model Regulation	LITHIUM ION BATTERIES
Transport hazard class(es)	
IATA	9
IMDG	9
Model Regulation	9
Packing group	
IATA	N/A
IMDG	N/A
Model Regulation	N/A
Packaging Sign	
IATA	
IMDG	N/A
Model Regulation	N/A
Environmental hazards	
Marine pollutant:	No
Special precautions for user	Not applicable.

Transport information: The Cylinder Li-ion Battery 18650-2200mAh has passed the test UN38.3, according to the report ID: MLI4QD6U90261721.

Exceeds the standard of Table 965-Ⅱ, so it belongs to dangerous goods. According to the Packing Instruction 965 section Ⅰ B of IATA DGR 58th Edition for transportation, Cargo aircraft only.

According to the special provision 188 of IMDG (37-14) or the <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (19th). The products are not subject to dangerous goods.

Separate batteries to prevent short-circuiting. and they should be packed in strong package during transport. Lithium cell or battery should incorporate a safety venting device or be designed to prevent a violent rupture under normal transport conditions. Keep away from high temperature and open flames. Lithium ion cells and batteries must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.

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
1333-86-4	Listed	Listed	Listed DSL	Listed

Section 16 - Other Information

Issue Time: 2017-03-28

Issue Department: Technical department

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