



Pony Testing International Group

Report No.: MOI16AFJ60895716

# MSDS Report

2021年1月1日生效

Sample Name  
& Model

Cylindrical Lithium ion Cell SZNS18650-2200

Applicant

Shenzhen Zhuoneng New Energy Corporation Limited

Address

Block A2, A3, A4(2/3/4floor), A5, No.6 Fuping middle road,  
Pingdi Street, Longgang District, Shenzhen

No.: MOI16AFJ60895716

Code: hDat5

PONY  
©Hotline 400-819-5688

北京实验室: (010)83055000

上海实验室: (021)64851999

青岛实验室: (0532)88706866

天津实验室: (022)23607888

苏州实验室: (0512)62997900

长春实验室: (0431)85150908

大连实验室: (0411)87336618

哈尔滨实验室: (0451)58627755

郑州实验室: (0371)69350670

新疆实验室: (0991)6684186

石家庄实验室: (0311)85376660

西安实验室: (029)89608785

呼和浩特实验室: (0471)3450025

杭州实验室: (0571)85806807

宁波实验室: (0574)87977185

武汉实验室: (027)83997127

合肥实验室: (0551)63843474

广州实验室: (020)89224310

厦门实验室: (0592)5568048

成都实验室: (028)87702708

## 声明 Statement

1. 本证明/报告的结论仅对委托方所送样品负责。  
The conclusion of the certificate/report is responsible for the provided sample only.
2. 委托方必须如实提供样品, 申报和声明资料, 并保证与实际相符, 否则由委托方承担由此导致的全部后果和责任。  
The applicant shall provide accurately and truly the description and statement of the sample, shall guarantee to match the sample and real situation which they provided and declared. Otherwise the application shall bear any relevant consequences and responsibility.
3. 如委托方提供的样品及相关资料存在虚假、伪造等情形, 所造成的全部后果和责任由委托方承担。  
In case the sample and documents provided involved in the situation of fake and forgery, any consequences and responsibility caused by this shall be undertaken by applicant.
4. 本证明/报告私自转让、盗用、冒用、涂改、未经本单位批准的复制(全文复制除外)或以其它任何形式的篡改均属无效, 本单位将对上述行为追究其相应的法律责任。  
The certificate/report is invalid in case of illegal transfer, embezzlement, imposture, modification or any altering, reproducing except in full, without approval of PONY. PONY shall investigate and affix the applicant's legal liability accordingly.
5. 本证明/报告不考虑国家及经营人差异。  
The certificate/report takes no account of the differences of countries and applicants.
6. 本单位有权在完成证明/报告后处理委托方所送样品。  
PONY has the right to dispose the provided sample after approval of the certificate/report.

### ▲ 防伪说明:

- (1) 报告编号是唯一的;
- (2) 报告采用特制防伪纸张印制, 纸张表面带有“PONY”防伪纹路, 该防伪纹路不支持复印, 即复制件不会带有“PONY”防伪纹路;
- (3) 报告采用的防伪纸张内部亦加带有高科技“PONY”防伪水印, 只有在验钞机等紫外线照射下方可显出无色荧光防伪字样。



全国服务热线  
400-819-5688

WWW.PONYTEST.COM

扫描二维码  
关注谱尼测试微信  
公众号 PONY4008195688



北京实验室: (010) 83055000	武汉实验室: (027) 83997127	哈尔滨实验室: (0451) 58627755
上海实验室: (021) 64851999	长春实验室: (0431) 85150908	石家庄实验室: (0311) 85376660
青岛实验室: (0532) 88706866	大连实验室: (0411) 87336618	乌鲁木齐实验室: (0991) 6684186
深圳实验室: (0755) 26050909	郑州实验室: (0371) 69350670	呼和浩特实验室: (0471) 3450025
天津实验室: (022) 23607888	西安实验室: (029) 89608785	杭州实验室: (0571) 85806807
苏州实验室: (0512) 62997900	太原实验室: (0351) 7555762	宁波实验室: (0574) 87977185
		温州实验室: (0577) 88271060
		合肥实验室: (0551) 63843474
		广州实验室: (020) 89224310
		厦门实验室: (0592) 5568048
		成都实验室: (028) 87702708



Pony Testing International Group

Report No.: MOI16AFJ60895716 Date: 2020-12-24 Page 1 of 10

## Material Safety Data Sheet

Reference to ST/SG/AC.10/30/Rev.8 (GHS)

### Section 1 - Chemical Product and Company Identification

#### Chemical Product Identification

**Sample Name:** Cylindrical Lithium ion Cell**Sample Model:** SZNS18650-2200**Recommended Uses:** N/A**Restrictions on Use:** N/A**Supplier Name:** Shenzhen Zhuoneng New Energy Corporation Limited**Address:** Block A2, A3, A4(2/3/4floor), A5, No.6 Fuping middle road, Pingdi Street, Longgang District, Shenzhen**Phone Number:** 0755-84072583**FAX:** 0755-84090966**E-mail:** renzheng@szznp.com**Emergency Phone Number:** 0755-84072583

### Section 2 - Hazards Identification

**Emergency overview:** This product is a battery. Intended use of the product should not result in exposure to the chemical substance. In case of rupture the below hazards exist.

#### Classification according to GHS

Acute toxicity, oral (4)

Skin corrosion/irritation (2)

Serious eye damage/eye irritation (2A)

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

#### Label elements

**Hazard pictogram(s):****Signal word:**

Warning

**Hazard statement(s):**

H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H335 May cause respiratory irritation



Pony Testing International Group

Report No.: MOI16AFJ60895716 Date: 2020-12-24 Page 2 of 10

**Precautionary statement(s):**
**Prevention:**

- P264 Wash skin and clothing thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves, protective clothing, eye protection, face protection.
- P261 Avoid breathing dust, fume, gas, mist, vapours, spray.
- P271 Use only outdoors or in a well-ventilated area.

**Response:**

- P301 + P312 IF SWALLOWED: Call a POISON CENTER if you feel unwell.
- P330 Rinse mouth.
- P302 + P352 IF ON SKIN: Wash with plenty water.
- P321 Specific treatment (See additional emergency instructions).
- P333 + P313 If skin irritation or rash occurs: Get medical advice.
- P362 + P364 Take off contaminated clothing and wash it before reuse.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P337 + P313 If eye irritation persists: Get medical advice.
- 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 Send contents 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 (%)
LiNi <sub>x</sub> Co <sub>y</sub> Mn <sub>z</sub> O <sub>2</sub>	---	---	30-37
Graphite	7782-42-5	231-955-3	15-20
Carbon black	1333-86-4	215-609-9	0-1



Polyvinylidene fluoride resin	24937-79-9	607-458-6	0-1
Phosphate(1-), hexafluoro-, lithium	21324-40-3	244-334-7	12-16
Polypropylene	9003-07-0	618-352-4	6-10
Aluminium	7429-90-5	231-072-3	2-5
Copper	7440-50-8	231-159-6	5-10
Iron	7439-89-6	231-096-4	10-15

## 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:** Treat symptomatically.

## Section 5 - Fire Fighting Measures

### Suitable extinguishing media:

Small Fire: Dry chemical, CO<sub>2</sub>, water spray or regular foam. Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk.

### 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°C (302°F)), when damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in close proximity.

**Specific protective actions for fire-fighters:**

Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

## Section 6 - Accidental Release Measures

**Personal precautions:**

As an immediate precautionary measure, isolate spill or leak area for at least 25 meters (75 feet) in all directions. Keep unauthorized personnel away. Stay upwind, uphill and/or upstream. Ventilate closed spaces before entering. Large Spill: Consider initial downwind evacuation for at least 100 meters (330 feet).

**Protective equipment:**

No data available.

**Emergency procedures:**

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Absorb with earth, sand or other non-combustible material. Leaking batteries and contaminated absorbent material should be placed in metal containers.

**Environmental precautions:**

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

**Methods and materials for containment and cleaning up:**

For all waste handling must refer to United Nations, 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:**

Avoid short circuiting the battery. Avoid mechanical damage of the battery. Do not open or disassemble. Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.

**Conditions for safe storage, including any incompatibilities:**

Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the long time of sunlight.



## Section 8 - Exposure Controls/Personal Protection

### Control parameters

CAS No.	ACGIH	NIOSH	OSHA
7782-42-5	TLV-TWA 2mg/m <sup>3</sup>	REL-TWA 2.5mg/m <sup>3</sup>	PEL-TWA 15mppcf PEL-TWA 20mppcf
1333-86-4	TLV-TWA 3mg/m <sup>3</sup>	REL-TWA 3.5mg/m <sup>3</sup>	PEL-TWA 3.5mg/m <sup>3</sup>
24937-79-9	N/A	N/A	N/A
21324-40-3	N/A	N/A	N/A
9003-07-0	N/A	N/A	N/A
7429-90-5	TLV-TWA 1mg/m <sup>3</sup>	REL-TWA 2mg/m <sup>3</sup> REL-TWA 5mg/m <sup>3</sup> REL-TWA 10mg/m <sup>3</sup>	PEL-TWA 5mg/m <sup>3</sup> PEL-TWA 15mg/m <sup>3</sup>
7440-50-8	TLV-TWA 0.2mg/m <sup>3</sup> TLV-TWA 1mg/m <sup>3</sup>	REL-TWA 1mg/m <sup>3</sup> REL-TWA 0.1mg/m <sup>3</sup>	PEL-TWA 0.1mg/m <sup>3</sup> PEL-TWA 1mg/m <sup>3</sup>
7439-89-6	N/A	N/A	N/A

### 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. For a large large number of battery leakages, wear chemical protective clothing, including self-contained breathing apparatus.

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

**Eye 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:** Blue.

**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°C:	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.

**Incompatible 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
7782-42-5	No data available.
1333-86-4	No data available.



24937-79-9	No data available.
21324-40-3	No data available.
9003-07-0	No data available.
7429-90-5	No data available.
7440-50-8	No data available.
7439-89-6	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

<b>UN or ID Number</b>	
IATA	UN3480 UN3481
IMDG	UN3480 UN3481
<b>Proper Shipping Name/Description</b>	
IATA	Lithium ion batteries Lithium ion batteries contained in equipment
IMDG	LITHIUM ION BATTERIES LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
<b>Class or Div. (Sub Hazard)</b>	
IATA	9
IMDG	9
<b>Packing Group</b>	
IATA	N/A
IMDG	N/A
<b>Hazard Label</b>	
IATA	965:  / 967: N/A
IMDG	N/A
<b>Environmental hazards</b>	
<b>Marine pollutant:</b>	No
<b>Special precautions for user</b>	No information available.

**Transport information:** The Cylindrical Lithium ion Cell SZNS18650-2200 has passed the test UN38.3, according to the report ID: MLIXWHFB12716721.

Exceeds the standard of Table 965- II , so it belongs to dangerous goods. According to the Packing Instruction 965 section IB of IATA DGR 62<sup>nd</sup> Edition for transportation, Cargo aircraft only.

According to the Packing Instruction 967 section II of IATA DGR 62<sup>nd</sup> Edition for transportation.

According to the special provision 188 of IMDG (39-18), the goods are not subject to other provision of this code.

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



Pony Testing International Group

to prevent a violent rupture under normal transport conditions. Keep away from high temperature and open flames.

**Note: State of Charge (SoC) not exceeding 30% of their rated capacity. (By air, Lithium ion batteries)**

**Batteries weight in the package < 5kg. (By air, Batteries installed in equipment)**

Transport Fashion: By air, by sea.

## 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
7782-42-5	Listed	Listed	Listed DSL	Listed
1333-86-4	Listed	Listed	Listed DSL	Listed
24937-79-9	Listed	Listed	Listed DSL	Listed
21324-40-3	Listed	Listed	Listed DSL	Listed
9003-07-0	Listed	Listed	Listed DSL	Listed
7429-90-5	Listed	Listed	Listed DSL	Listed
7440-50-8	Listed	Listed	Listed DSL	Listed
7439-89-6	Listed	Listed	Listed DSL	Listed

## Section 16 - Other Information

Issue Date: 2020-12-24

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:



Pony Testing International Group

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-STEEL: (Permissible concentration-short time exposure limit);  
 PC-TWA: (Permissible concentration-time weighted average);  
 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\*\*\*