



Shenzhen Anbotek Compliance Laboratory Limited

SDS REPORT

Report No.....: SZABB180328003-02

Client.....: Elexa Consumer Products Inc.

Address.....: Suite333, 2275 Half Day Road, Bannockburn, IL 60015,USA

Manufacturer.....: Guangxi Ramway New Energy Corp.,Ltd

Address.....: No.9,Xingyu Road,High-tech Zone,Wuzhou  
543000,Guangxi,China

Written by : Lucy zeng

Approved by : [Signature]

Position : Authorized signatory



Date(s) of Report : 2018-04-09 to 2018-04-10



# SAFETY DATA SHEET

According to HCS-2012 APPENDIX D TO § 1910.1200 (Version: 1.0/EN)

## Section 1. Identification

### (a) Product identifier

Product name: Li-SOCI<sub>2</sub>

### (b) Other means of identification

Product description:

Model: ER18505

Nominal Voltage: 3.6V

Rated Capacity: 4000mAh

Watt-hour: 14.4Wh

Weight: 32g

### (c) Recommended use of the chemical and restrictions on use

Recommended use: Li-SOCI<sub>2</sub>

Restriction on use: No information available.

### (d) Details of the supplier of the product

Company name(China): Guangxi Ramway New Energy Corp.,Ltd

Address: No.9,Xingyu Road,High-tech Zone,Wuzhou 543000,Guangxi,China

Telephone No.: 18977407530

Email: ruiyi156@163.com

## Section 2. Hazard(s) identification

### Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.


Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

### GHS Label elements, including precautionary statements

#### Shenzhen Anbotek Compliance Laboratory Limited

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**Emergency Overview**

<b>Signal word</b>	<b>Danger</b>	
<b>Hazard Statements</b>	Causes skin irritation Causes serious eye irritation May cause an allergic skin reaction Suspected of causing cancer	
		
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 above hazards exist.		
<b>Appearance</b>	Silver	<b>Physical State</b> Solid containing liquid Solid
		<b>Odor</b> None

**Precautionary Statements - Prevention**

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Contaminated work clothing should not be allowed out of the workplace
- Wear protective gloves
- Do not breathe dust/fume/gas/mist/vapors/spray
- Do not eat, drink or smoke when using this product
- Wear eye/face protection

**Precautionary Statements - Response**

- IF exposed or concerned: Get medical advice/attention
- Specific treatment (see supplemental first aid instructions on this label)

**Eyes**

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention

**Skin**

- IF ON SKIN: Wash with plenty of soap and water
- Take off contaminated clothing and wash before reuse
- If skin irritation or rash occurs: Get medical advice/attention

**Precautionary Statements - Storage**

- Store locked up

**Precautionary Statements - Disposal**

- Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

- Not applicable

**Unknown Toxicity**

**Shenzhen Anbotek Compliance Laboratory Limited**



37.3% of the mixture consists of ingredient(s) of unknown toxicity

**Other information**

Very toxic to aquatic life with long lasting effects  
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

**Interactions with Other Chemicals**

No information available.

### Section 3. Composition/Information on Ingredients

(a) Mixtures information

Chemical Name	Concentration%	CAS No.
Lithium(Li)	8	7439-93-2
Acetylene black(C)	9	1333-86-4
Thionyl chloride( $\text{SOCl}_2$ )	70	7719-09-7
Lithium aluminum tetrachloride ( $\text{LiAlCl}_4$ )	10	14024-11-4
Nickel(Ni)	3	7440-02-0

### Section 4. First-Aid Measures

(a) Description of first aid measures

**Inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice / attention if you feel unwell.

**Skin contact:** Remove contaminated clothes and rinse the skin with plenty of water. Get medical advice /attention if you feel unwell.

**Eye contact:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice / attention if you feel unwell.

**Ingestion:** Have victim drink 60 to 240 mL (2-8 oz.) of water. and DO NOT induce vomiting. Get medical aid.

(b) Most important symptoms/effects, acute and delayed

Contact with internal components may cause allergic skin sensitization (rash) and irritate eyes, skin, nose, throat, respiratory system. Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).

(c) Immediate medical attention and special treatment

No information available.

## Section 5. Fire-Fighting Measures

### (a) Extinguishing media

Suitable extinguishing media: Use foam, dry powder or dry sand, CO<sub>2</sub> as appropriate.

Unsuitable extinguishing media: No information available.

### (b) Special hazards arising from the chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a firesituation. This could result in the release of flammable or corrosive materials.

Hazardous combustion products: CO,CO<sub>2</sub>, Metal oxides, Irritating fumes.

### (c) Special protective equipment and precautions for fire-fighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus.

The staff must equipwith filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense thefire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon aspossible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

## Section 6. Accidental Release Measures

### (a) Personal precautions, protective equipment and emergency procedures

If theLi-SOCl<sub>2</sub> material is released, remove personnel from area until fumes dissipate. Provide maximumventilation to clear out hazardous gases. The preferred response is to leave the area, dispose the case after thebatteries cool and vapors dissipate. Providemaximum ventilation.

Avoid skin and eye contact or inhalation of vapors.

### (b) Environmental Precautions

Prevent material from contaminating soil and from entering sewers or waterways.

### (c) Methods and materials for containment and cleaning up

If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic linedcontainer. Dispose off according to the local law and rules. Avoid leached substances to get into the earth,canalization or waters.

## Section 7. Handling and Storage

### (a) Precautions for safe handling

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommendedbattery types. Keep batteries away from children. For devices to be used by children, the battery casing should beprotected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery changealways replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throwbatteries into water. Do

notthrow batteries into fire. Avoid deep discharge. Do not short-circuit batteries  
Userecommended charging time and current.

**(b) Conditions for safe storage, including any incompatibilities**

1. Batteries should be separated from other materials and stored in a noncombustible, well ventilated, sprinkler-protected structure with sufficient clearance between walls and battery stacks. Do not place batteries near heating equipment, nor expose to direct sunlight for long periods.

2. Do not store batteries above 35°C or below -20°C. Store batteries in a cool (about 20±5°C) in a long time, dry and ventilated area that is subject to little temperature change. Elevated temperatures can result in reduced battery cycle life. Battery exposure to temperatures in excess of 60°C will result in the battery venting flammable liquid and gases.

3. Keep batteries in original package until use and do not jumble them.

## **Section 8. Exposure Controls/Personal Protection**

**(a) Engineering Controls**

Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor. Keepaway from heat and open flame. Store in a cool, dry place.

**(b) Personal Protective Equipment**

**Respiratory Protection:** Not necessary under normal conditions. **Skin and body Protection:** Not necessary under normal conditions, Wear neoprene or nitrile rubber gloves if handling an open or leaking battery.

**Hand protection:** Wear neoprene or natural rubber material gloves if handling an open or leaking battery.

**Eye Protection:** Not necessary under normal conditions, wear safety glasses if handling an open or leaking battery.

**(c) Other Protective Equipment**

Have a safety shower and eye wash fountain readily available in the immediate work area.

**(d) Hygiene Measures**

Do not eat, drink, or smoke in work area. Maintain good housekeeping.

## **Section 9. Physical and Chemical Properties**

(a) Appearance Solid

(b) Odor Monotony

(c) Odor threshold Not available.

(d) pH Not available.

- (e) Melting point/freezing point Not available.
- (f) Initial boiling point and boiling range Not available.
- (g) Flash point Not applicable.
- (h) Evaporation rate Not applicable.
- (i) Flammability Non flammable.
- (j) Upper/lower flammability or explosive limits Not available.
- (k) Vapor pressure Not applicable.
- (l) Vapor density Not available.
- (m) Relative density Not available.
- (n) Solubility(ies) Insoluble in water.
- (o) Partition coefficient: n-octanol/water Not available.
- (p) Auto-ignition temperature 130°C
- (q) Decomposition temperature Not available.
- (r) Viscosity Not available.

## Section 10. Stability and Reactivity

### (a) Reactivity

Stable under recommended storage and handling conditions.

### (b) Chemical stability

Stable under normal conditions.

### (c) Possibility of hazardous reactions

When heated above 150°C the risk of rupture occurs. Due to special safety construction, rupture implies contraindication of pressure without ignition.

### (d) Conditions to avoid

Do not subject Li-SOCl<sub>2</sub> to mechanical shock. Keep away from open flames, high temperature.

### (e) Incompatible materials

Strong oxidizer, strong acid.

### (f) Hazardous decomposition products

Under fire conditions, the electrode materials can form carcinogenic nickel and cobalt oxides.

## Section 11. Toxicological Information

### (a) Information on the likely routes of exposure

**Inhalation:** Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.

**Ingestion:** Ingestion of battery contents may cause mouth, throat and intestinal burns and

damage.

**Skin contact:** Contact with battery electrolyte may cause burns and skin irritation.

**Eye contact:** Contact with battery electrolyte may cause burns. Eye damage is possible.

Under normal conditions (during charge and discharge) release of ingredients does not occur.

If accidental release occurs see information in section 2, and 4. Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

**(b) Information on toxicological characteristics**

**Acute toxicity:** No data available.

**Skin corrosion/irritation:** The liquid in the battery irritates.

**Serious eye damage/irritation:** The liquid in the battery irritates.

**Respiratory sensitization:** The liquid in the battery may cause sensitization to some person.

**skin sensitization:** The liquid in the battery may cause sensitization to some person.

**Carcinogenicity:** Cobalt and Cobalt compounds are considered to be possible humancarcinogen(s).

**Germ Cell Mutagenicity:** No data available.

**Reproductive Toxicity:** No data available.

**STOT-Single Exposure:** No data available.

**STOT-Repeated Exposure:** No data available.

**Aspiration Hazard:** No data available.

## **Section 12. Ecological Information**

**(a) Ecotoxicity**

Water hazard class 1(Self-assessment): slightly hazardous for water.

**(b) Persistence and Degradability**

No information available.

**(c) Bioaccumulative potential**

No information available.

**(d) Mobility in soil**

No information available.

**(e) Other adverse effects**

No information available.

## **Section 13. Disposal Considerations**

**(a) Safe handling and methods of disposal**

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.





Product disposal recommendation: Observe local, state and federal laws and regulations.  
Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassemble the battery. Completely discharge containers (no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local, state and federal laws and regulations. The potential effects on the environment and human health of the substances used in batteries and accumulators; the desirability of not disposing of waste batteries and accumulators as unsorted municipal waste and of participating in their separate collection so as to facilitate treatment and recycling.

## Section 14. Transport Information

According to PACKING INSTRUCTION 968~970 of IATA DGR 59th Edition for transportation, the special provision 230 of IMDG (inc Amdt 38-16). The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles. Don't put the goods together with oxidizer and chief food chemicals. The transport vehicle and ship should be cleaned and sterilized before transport. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don't stop over in the residential area and congested area.

**(a) UN number**

3090&3091

**(b) UN Proper shipping name**

Lithium metal batteries (including lithium alloy batteries) or; Lithium metal batteries contained in equipment or Lithium Metal Batteries packed with equipment (including lithium alloy batteries)

**(c) Transport hazard class(es)**

9

**(d) Packing Instruction (if applicable)**

968 IA, 969 I, 970 I

**(e) Marine pollutant (Yes/No)**

No

**(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)**

No information available.

**(g) Special precautions**

No information available.



## Section 15. Regulatory Information

OSHA hazard communication standard (29 CFR 1910.1200)

Hazardous

V

Non-hazardous

## Section 16. Other Information

### (a) Preparation and revision information

Date of previous revision: Not applicable. Date of this revision: 2018-01-01

Revision summary: The first New SDS

### (b) Abbreviations and acronyms

TSCA: Toxic Substances Control Act, The American chemical inventory.

DSL: Domestic Substances List

EINECS: European Inventory of Existing Commercial chemical Substances

ENCS: Japanese Existing and New Chemical Substances

ECL: Existing Chemicals List, the Korean chemical inventory

IECSC: Inventory of existing chemical substances in China.

### (c) Disclaimer

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

----- End of the SDS -----