

## Material Safety Data Sheet

For

**SHENZHEN XTAR ELECTRONICS CO., LTD**

**5th Floor, No.77 Xinhe Rd, Shangmugu, Pinghu Area, Longgang District, Shenzhen,  
Guangdong, China  
and for their product**

### Rechargeable Li-ion Battery

Model/type reference ..... : 16340 650mAh

Nominal Voltage..... : 3.7Vdc

Typical Capacity..... : 650mAh Max.

Weight..... : /

Size..... : /

Version number..... : V1.0

Revision date..... : N/A.

---

Laboratory ..... : Shenzhen STONG Compliance Testing Laboratory Co.,Ltd.

Address ..... : F/4, Building 10, Da Yuan Industrial Zone, Xili Town,  
Nanshan District, Shenzhen, Guangdong, China

---

Compiled by (name+ signature) : *Sifeifei*

Approved by (+ signature) ..... : *Xu Peng*

---



## Section 1- Chemical Product and Company Identification

Product Identification: Rechargeable Li-ion Battery

Model:16340 650mAh

Recommended Uses: N/A

Restrictions on use: N/A

Manufacture's/Supplier Name: SHENZHEN XTAR ELECTRONICS CO., LTD

Address: 5th Floor, No.77 Xinhe Rd, Shangmugu, Pinghu Area, Longgang District, Shenzhen, Guangdong, China

Phone number: 0755-25507076

Fax:0755-25507076

E-mail: sales@xtarlight.com

Preparation Date: 2016-06-12

Item Number: R20160606367S

## 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# 1333-86-4**

**Classification according to GHS**

Carcinogenicity(2)

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

Label elements

Hazard pictogram(s):

Signal word:

Hazard statement(s):

H351 Suspected of causing cancer

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

Precautionary statement(s):

Prevention:

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

P405 Store locked up.

Disposal:

P501 Contents handling to approved waste treatment plants.

**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:

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):

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.

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:

Hazard statement(s):

H335 May cause respiratory irritation

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

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 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(%)
Cobaltate, lithium	12190-79-3	235-362-0	30~37
Diaphragm paper	----	----	15~20
Carbon black	1333-86-4	215-609-9	0~1
Polyvinylidene fluoride resin	24937-79-9	607-458-6	0~1
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: 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<sub>2</sub>.

**Unsuitable extinguishing media:**

No data available.

**Specific hazards arising from the chemical:**

Specific 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:**

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

## Section 6 – ACCIDENTAL RELEASE MEASURES

If batteries show signs of leaking, avoid skin or eyes contact with the material leaking from the

battery. Use chemical resistant rubber gloves and non-flammable absorbent materials for clean up. Mix with inert material (e.g. dry sand, vermiculite) and transfer to sealed container for disposal.

## 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 CONTROL/PPE

**Control parameters**

CAS No.	ACGIH	NIOSH	OSHA
12190-79-3	N/A	N/A	N/A
133-86-6	TLV-TWA 3.5mg/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 10mg/m <sup>3</sup> TLV-TWA 5mg/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 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/CHEMICAL PROPERTIES

**Appearance:** Black case (containing dielectric)

**Odor:** Odorless

**MP/MP Range:** >300℃

**pH Value:** 1~2

**Solubility:** Partial soluble in water

## 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.
1333-86-4	LD50 Rat(oral):15400mg/kg
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 of 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.  
**Bilaccumulative 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
Packaging group	
IATA	N/A
IMDG	N/A
Model Regulation	N/A
Packaging Sign	
IATA	N/A
IMDG	N/A
Model Regulation	N/A
Environmental hazards	
Marine pollutant:	No
Special precautions for user	Not applicable

Transport information: The Cylindrical Lithium-ion Cell 16340 3.7V 2.405Wh has passed the test UN38.3, according to the report ID:

According to the Packing Instruction 965~970 section II of IATA DGR 57<sup>th</sup> Edition for transportation. According to the special provision 188 of IMDG(37-14) or the 《Recommendations On The Transport Of Dangerous Goods-Moel Regulations》 (19<sup>th</sup>). 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.

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
1333-86-4	Listed	Listed	Listed	Listed
24937-79-9	Listed	Listed	Listed	Listed
21324-40-3	Listed	Listed	Listed	Listed
9003-07-0	Listed	Listed	Listed	Listed

7429-90-5	Listed	Listed	Listed	Listed
7440-50-8	Listed	Listed	Listed	Listed
7439-89-6	Listed	Listed	Listed	Listed

## Section 16 - OTHER INFORMATION

Issue Time:2016-01-20

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

\*\*\*\*\*The End\*\*\*\*\*