Safety Data Sheet (SDS)

The content and format of this SDS is accordant with 29 CFR 1910.1200 (OSHA standard)

1. Identification

Product identifier:

Product name: Li-ion Rechargeable Cell

Other means of identification:

Product Model: 124672

Recommended use of the chemical and restrictions on use: Power supply. Restrictions on use: Do NOT use it in an application which may contaminate food or do harm to human health.

Manufacturer/Supplier: ShenZhen EPT Battery Co., LTD.

Address: Building 3, Huancheng Industrial Park, No. 41 Dalang North Road, Dalang, Longhua District, Shenzhen, 518109 Guangdong, P.R. China

Tel.: +86-755-28078063

Email: evan@ept-battery.com

Website: www.ept-battery.com

Emergency phone number: +86-755-28078063

2. Hazards identification

GHS classification *(for contact with leakage from rupture)*:

Physical hazards:	Not classified
Health hazards:	Acute toxicity (Oral) - Category 4
	Skin corrosion/irritation - Category 1
	Serious eye damage/eye irritation - Category 1
	Sensitisation, skin - Category 1
	Carcinogenicity - Category 2
	Reproductive Toxicity - Category 1B
	Specific target organ toxicity, repeated exposure - Category 1 (Bones, teeth, lungs)
Environmental hazards:	Hazardous to the aquatic environment, acute hazard - Category 3
	Hazardous to the aquatic environment, long-term hazard - Category 3

Note: *This product is generally not hazardous under normal conditions. But like any sealed container, battery may rupture when exposed to excessive heat and this could result in the release of hazardous materials. The information below is given to minimize any possible hazard during handling, storage and disposal.*

Signal Word: **Danger**

Pictograms:

Hazard Statements *(for contact with leakage from rupture)***:**

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H351: Suspected of causing cancer.

H360: May damage fertility or the unborn child.

H372: Causes damage to organs (Bones, teeth, lungs) through prolonged or repeated exposure.

H402: Harmful to aquatic life.

H412: Harmful to aquatic life with long lasting effects.

Precautionary Statements *(for contact with leakage from rupture)***:**

P201: Obtain special instructions before use.

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

P260: Do not breathe dust/fume/gas/mist/ vapours/spray.

P264: Wash hands thoroughly after handling.

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

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

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response Precautionary Statements *(for contact with leakage from rupture)***:**

P301 + P312: IF SWALLOWED: Call a POISON CENTER/doctor, if you feel unwell.

P330: Rinse mouth.

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P363: Wash contaminated clothing before reuse.

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

P310: Immediately call a POISON CENTER/doctor.

P321: Specific treatment (Please see the specific measures for accident that included in the label, or go to hospital for treatment).

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

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

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

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

P314: Get medical advice/attention if you feel unwell.

Storage precautionary statements *(for contact with leakage from rupture)***:**

P405: Store locked up.

Disposal precautionary statements *(for contact with leakage from rupture)***:**

P501: Dispose of contents/container according to relevant local and national regulations (It is recommended to recycle and reuse it).

Other hazards: Not found.

3. Composition/information on ingredients

Product description: substance (); mixture (√).

Ingredient (s)	CAS No.	EC No.	% by weight
Lithium Cobalt Oxide	12190-79-3	235-362-0	39.07
Graphite	7782-42-5	231-955-3	19.53
Phosphate(1-), hexafluoro-, lithium	21324-40-3	244-334-7	18.07
Aluminum	7429-90-5	231-072-3	10.23
Copper	7440-50-8	231-159-6	9.47
Nickel	7440-02-0	231-111-4	1.68
Polypropylene	9003-07-0	618-352-4	0.98
Polyethylene	9002-88-4	618-339-3	0.97

4. First aid measures

Persons using this product should consult a physician or other medical professional if an accident involving this product results in injury. Specific first-aid measures are as follows *(for contact with leakage from rupture)***:**

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/doctor.

Skin Contact: Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before reuse.

Eyes Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Ingestion: Rinse mouth. Do not induce vomiting without doctor's instruction. Immediately call a POISON CENTER/doctor.

Acute effect and delayed effect:

Acute effect: Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction.

Delayed effect: Suspected of causing cancer. May damage fertility or the unborn child. Causes damage to organs (Bones, teeth, lungs) through prolonged or repeated exposure.

Personal protective equipment: Wear protective gloves/protective clothing/eye protection/face protection when necessary.

Indication of immediate medical attention and treatment needed, if necessary: Treat according to symptoms and exposure dose.

5. Fire-fighting measures

Extinguishing Media: Use dry chemical, foam, CO_2 for extinction.

Unsuitable Extinguishing Media: Reinforced liquid (straight stream).

Special hazards arising from the chemical: Cell may vent when subjected to excessive heat-exposing battery contents.

Fire Fighting Method:

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.
Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.
Special Fire Fighting Procedures: Structural firefighters must wear self-contained breathing apparatus and full protective equipment.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures:
Personal precautions: Use proper personal protective equipment as indicated in Section 8.
Emergency procedures: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk.
Environmental precautions: Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.
Methods and material for containment and cleaning up:
If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

7. Handling and storage

Precautions for safe handling:
Do not breathe vapors or fumes that may be evolved during processing.
Do not disassemble or burn batteries.
Do not squeeze or pierce batteries.
Do not put batteries into water.
Workers must wear proper protective equipment and must operate strictly according to relative rules.

Conditions for safe storage, including any incompatibilities:
Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.
Incompatible substances or mixtures: No information available.
Packing material: No information available.

8. Exposure controls/personal protection

Occupational Exposure Limits:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Graphite (CAS: 7782-42-5)	15 mppcf	2 mg/m^3 (Respirable fraction)
Copper (CAS: 7440-50-8)	1 mg/m^3	1 mg/m^3
Aluminum (CAS: 7429-90-5)	Total dust: 15 mg/m^3 Respirable Fraction: 5 mg/m^3	1 mg/m^3 (Respirable fraction)

Nickel (CAS: 7440-02-0)	1 mg/m^3	1.5 mg/m^3

Engineering Controls:

Use this product only in closed systems fully or with local exhaust ventilation.

Install washer eyes and safety showers near to the handling and storage area.

Shows the location of these facilities, with a clear and prominent warning board.

Personal Protective Equipment (For workers):

Protection of Hands:

Not necessary under conditions of normal use.

Recommend wearing protective gloves for industrial hygienic purpose *(for contact with leakage from rupture)*.

Protection of Eyes:

Not necessary under conditions of normal use.

Wear safety glasses when working in a dusty environment or liquid may splash *(for contact with leakage from rupture)*.

Respiratory Protection:

Not necessary under conditions of normal use.

Wear appropriate respirators when vapour or fume is generated from processing *(for contact with leakage from rupture)*.

Protection of Body:

Recommend wearing general working clothing.

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

9. Physical and chemical properties

Physical state	Solid
Color	Silver

Odor	If leaking, smells of medical ether.
Odor threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Flammability (solid, gas, etc.)	No data available
Upper/lower flammability or explosive limits	No data available
Vapor pressure	No data available
Relative vapor density	No data available
Density	No data available
Relative density	No data available
Solubility (ies)	No data available
Partition coefficient: n-octanol/Water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Kinematic viscosity	No data available
Particle characteristics	No data available
Other information	No data available

10. Stability and reactivity

Reactivity: Not reactive under normal handling and storage.

Chemical stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions: If leaked, the electrolyte may react violently with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

Conditions to Avoid: Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.

Incompatible materials: If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

Hazardous decomposition products: It may release hazardous fume (e.g. Carbon monoxide, carbon dioxide, lithium oxide fumes) from thermal decomposition.

11. Toxicological information

Product Toxicity Data:

Ingredient (s)	**CAS No.**	**LD_{50}/LC_{50} (Median lethal dose)**
Lithium Cobalt Oxide	12190-79-3	Acute toxicity (Oral) LD_{50}＞5,000 mg/kg (rat) Data source: ECHA Acute toxicity(Dermal) LD_{50}＞2,000 mg/kg (rat) Data source: ECHA
Graphite	7782-42-5	Acute toxicity (Oral) LD_{50}＞2,000 mg/kg (rat)

		Data source: ECHA
Phosphate(1-), hexafluoro-, lithium	21324-40-3	Acute toxicity (Oral) LD_{50}: 100 mg/kg (rat) Data source: ECHA
Copper	7440-50-8	Acute toxicity (Oral) LD_{50}＞2,500 mg/kg (rat) Data source: ECHA Acute toxicity(Dermal) LD_{50}＞2,000 mg/kg (rat) Data source: ECHA
Aluminum	7429-90-5	Acute toxicity (Oral) LD_{50}＞15,900 mg/kg (rat) Data source: ECHA
Nickel	7440-02-0	Acute toxicity (Oral) LD_{50}＞9,000 mg/kg (rat) Data source: ECHA
Polypropylene	9003-07-0	Acute toxicity (Oral) LD_{50}＞8,000 mg/kg (rat) Data source: KOSHA
Polyethylene	9002-88-4	Acute toxicity (Oral) LD_{50}＞8,000 mg/kg (rat) Data source: KOSHA
The whole product		Acute toxicity (Oral) LD_{50}: 553 mg/kg (Calculated value) Acute toxicity (Dermal) LD_{50}＞2,000 mg/kg (Calculated value)
Classification of the whole product:		Acute toxicity (Oral) - Category 4

Skin corrosion/irritation *(for contact with leakage from rupture)*:
Phosphate(1-), hexafluoro-, lithium (CAS: 21324-40-3): Category 1 (Data source: ECHA)
Classification of the whole product: Category 1

Serious eye damage/eye irritation *(for contact with leakage from rupture)*:
Phosphate(1-), hexafluoro-, lithium (CAS: 21324-40-3): Category 1 (Data source: ECHA)
Classification of the whole product: Category 1

Sensitisation, respiratory *(for contact with leakage from rupture)*:
No classification for this product.

Sensitisation, skin *(for contact with leakage from rupture)*:
Nickel (CAS: 7440-02-0): Category 1 (Data source: EU CLP)
Classification of the whole product: Category 1

Germ cell mutagenicity *(for contact with leakage from rupture)*:
No classification for this product.

Carcinogenicity *(for contact with leakage from rupture)*:
Nickel (CAS: 7440-02-0): Category 2 (Data source: EU CLP)
Classification of the whole product: Category 2

Reproductive Toxicity *(for contact with leakage from rupture)*:
Lithium Cobalt Oxide (CAS: 12190-79-3): Category 1B (Data source: ECHA)
Classification of the whole product: Category 1B

Specific target organ toxicity, single exposure *(for contact with leakage from rupture)*:
No classification for this product.

Specific target organ toxicity, repeated exposure *(for contact with leakage from rupture)*:
Phosphate(1-), hexafluoro-, lithium (CAS: 21324-40-3): Category 1 (Bones, teeth) (Data source: ECHA)
Nickel (CAS: 7440-02-0): Category 1 (lungs) (Data source: EU CLP)
Classification of the whole product: Category 1 (Bones, teeth,

	lungs)
Aspiration hazard *(for contact with leakage from rupture)*:	No classification for this product.

12. Ecological information

Ecotoxicity:

Graphite (CAS: 7782-42-5):

96h-LC_{50}＞100 mg/L, fish (Danio rerio) (ECHA)

Phosphate(1-), hexafluoro-, lithium (CAS: 21324-40-3):

96h-LC_{50}: 128 mg/L, fish (Oncorhynchus mykiss) (ECHA)

Copper (CAS: 7440-50-8):

96h-LC_{50}: 1.1 mg/L, fish (Lepomis macrochirus) (ECHA)

120d-NOEC: 0.123 mg/L, fish (Atherinops affinis) (ECHA)

Hazardous to the aquatic environment, acute hazard - Category 2 (EU CLP)

Hazardous to the aquatic environment, long-term hazard - Category 2 (EU CLP)

Nickel (CAS: 7440-02-0):

24h-LC_{50}: 9.75 mg/L, fish (Rasbora sumatrana) (ECHA)

Classification of the whole product:

Hazardous to the aquatic environment, acute hazard - Category 3

Hazardous to the aquatic environment, long-term hazard - Category 3

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Mobility in Soil: No data available

Other adverse effects: No relevant information.

13. Disposal considerations

Waste treatment methods:

It is recommended to recycle and reuse it.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

14. Transport Information

DOT/Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG:

Area	Method	Organization	Special Provision
International	**Air**	**IATA, ICAO**	**Packing Instruction 965-Section IB (regulated under the current 2025 Edition of the ICAO Technical Instruction for the Safe Transport of Dangerous Goods by Air and the 66th Edition of IATA DGR)** **IMP: RBI**

			Limit per Package: **Pax A/C = Forbidden** **CAO = 10 kg**
Europe	**Road and Rail**	**ADR/RID**	**SP 188**
International	**Marine**	**IMDG**	**SP 188**
U.S.A	**Rail, Road, Marine**	**DOT**	**DOT 49 CFR 173.185**

UN number: 3480
UN proper shipping name: LITHIUM ION BATTERIES
Transport hazard class(es): 9
Shipping Requirements:
DOT: Lithium batteries and cells are subject to shipping requirements exceptions under 49 CFR 173.185.
IATA: It can be transported by air according to the Packing Instructions PI 965 IB Section of IATA-DGR (66th (2025) Edition).
We further hereby certify that the consignment have already carried on UN 38.3 Test in accordance to IATA-DGR.

Special precautions:
Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

15. Regulatory information

United States:

Emergency Planning and Community Right-to-Know Act (EPCRA) section 313 chemicals:

Chemical Name	CAS No.	Weight-%	SARA 313 – Threshold Values %
Copper	7440-50-8	9.47	1
Aluminum	7429-90-5	10.23	1
Nickel	7440-02-0	1.68	0.1

40 CFR part 355 (Extremely Hazardous Substances): Not listed.

California Proposition 65 (Chemicals Known to the State to Cause Cancer or Reproductive Toxicity):

Chemical Name	CAS No.	Type of Toxicity
Nickel	7440-02-0	Cancer

Clean Water Act:

Ingredient (s)	CWA - Reportable Quantities	CWA - Hazardous Substances	CWA - Priority Pollutants	CWA - Toxic Pollutants
Copper (CAS: 7440-50-8)	2,270 kg	Listed	Listed	Listed
Nickel (CAS: 7440-02-0)	45.4 kg	Listed	Listed	Listed

Toxic Substances Control Act (TSCA):

Chemical Name	CAS No.	TSCA Inventory
Lithium Cobalt Oxide	12190-79-3	Listed
Graphite	7782-42-5	Listed

Phosphate(1-), hexafluoro-, lithium	21324-40-3	Listed
Copper	7440-50-8	Listed
Aluminum	7429-90-5	Listed
Nickel	7440-02-0	Listed
Polypropylene	9003-07-0	Listed
Polyethylene	9002-88-4	Listed

Carcinogenicity categories: Nickel (CAS: 7440-02-0): IARC-2B, Polypropylene (CAS: 9003-07-0): IARC-3, Polyethylene (CAS: 9002-88-4): IARC-3.

Other relevant laws and regulations:

Candidate List of Substances of very high concern (SVHC) according to ECHA: Not listed.

REACH Regulation Annex XVII Regulation List: Nickel (CAS: 7440-02-0).

REACH Regulation Annex XIV Authorization List: Not listed.

(EC) 1272/2008 Annex VI Table 3.1:

Ingredient(s)	**EC No. 1272/2008 Classification**	
	CLASS. CODE	**HAZARD CODE**
Copper (CAS: 7440-50-8)	Aquatic Chronic 2	H411
Aluminum (CAS: 7429-90-5)	Flam. Sol. 1 Water-react. 2	H228 H261
Nickel (CAS: 7440-02-0)	Carc. 2 STOT RE 1 Skin Sens. 1	H351 H372 ** H317

Germany – WGK: WGK-3.

16. Other information

DISCLAIMER:

All the information of this SDS is true and effective, and only for reference. Our company will not control the way how people use it, neither will we be responsible for any consequence. The users shall decide how to properly use the product or adopt certain production way for some special purpose. The above mentioned precautionary measures are helpful to avoid damage to the property or life safety during the operation or use of this product.

References:

Globally Harmonized System of Classification and Labelling of Chemicals (GHS Rev.7, 2017)
Globally Harmonized System of Classification and Labelling of Chemicals (GHS Rev.8, 2019)
ANSI Z400.1/Z129.1-2010
OSHA Hazard Communication Standard (HCS) 2024

Full description of some acronyms:

CAS-Chemical Abstracts Service
EINECS-European Inventory of Existing Commercial Chemical Substances

IMO-International Maritime Organization
IMDG-International Maritime Dangerous Goods
IATA-International Air Transport Association
ICAO-International Civil Aviation Organization
TSCA-Toxic Substances Control Act
OSHA-Occupational Safety and Health Administration
ACGIH- American Conference of Governmental Industrial Hygienists
ECHA- European Chemicals Agency
NITE-CHRIP- Japan National Institute of Technology and Evaluation-Chemical Risk Information Platform

The Issuing date: November 7, 2025
SDS Version: 1.0

**********The End **********