

Model LC-14500 Lithium-Ion Battery

1. Chemical Product and Company Identification

Product: LC-14500

Company: AA Portable Power Corp/dba: BatterySpace.com

825 S 19th Street, Richmond, CA 94804

Tel: 510-525-2328

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2. Composition Information

Common chemical name / General name	CAS number	Concentration / Concentration range	Classification and hazard label
Lithium Cobaltate (LiCoO ₂)	12190-79-3	25-40%	-
Iron	7439-89-6	15-25%	-
Aluminum foil	7429-90-5	2-6%	-
Graphite (natural graphite) (Artificial graphite)	7782-42-5 7740-44-0	10-20%	-
Copper foil	7440-50-8	5-15%	Sensitization of the skin
Organic electrolyte	-	10-20%	Inflammable liquid

* Equivalent Lithium content: 0.23g, Electric Power Capacity:2.77 Wh

3. Hazards Identification

For the battery cell, chemical materials are stored in a hermetically sealed metal case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage.

However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by miss-use, the gas release vent will be operated. The battery cell case will be breached at the extreme, hazardous materials may be released.

Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted. Use extinguishing media suitable for materials burning in fire.

Primary routes of entry

Skin contact	Skin absorption	Eye contact	Inhalation	Ingestion
No	No	No	No	No

Symptoms of exposure

Skin contact	No effect under routine handling and use.
Skin absorption	No effect under routine handling and use.
Eye contact	No effect under routine handling and use.
Inhalation	No effect under routine handling and use.
Reported as carcinogen	Not applicable

4. First Aid Measures

Skin contact	Remove contaminated clothes and shoes immediately. Wash with soap and plenty of water immediately.
Eye contact	Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.
Inhalation	Contents of an open battery can cause respiratory irritation. Remove to fresh air immediately and make the victim blow his/her nose, gargle. Seek medical attention if necessary.

Ingestion	Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. Induce vomiting. When impossible or the feeling is not well after vomiting, seek medical attention.
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5. Fire Fighting Measures

- Suitable extinguishing media: Since vapor, generated from burning batteries may make eyes, nose and throat irritate, be sure to extinguish the fire on the windward side. Pouring water, carbon dioxide gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam are effective.
- Specific hazards: Corrosive gas may be emitted during fire.
- Specific methods of fire-fighting: When the battery burns with other combustibles simultaneously, take fire-extinguishing method which correspond to the combustibles. Extinguish a fire from the windward as much as possible.
- Special protective equipment for firefighters :
- Respiratory protection : Respiratory equipment of a gas cylinder style or protection-against-dust mask

Hand protection: Protective gloves

Eye protection: Goggle or protective glasses designed to protect against liquid splashes

Skin and body protection: Protective cloth

6. Accidental Release Measures

Internal cell materials, such as electrolyte leaked from battery cell, are carefully dealt with according to the followings.

- Personal precautions: Remove leaked materials with protective equipment (protective glasses and protective gloves). Do not inhale the gas as much as possible. Moreover, avoid touching with as much as possible.
- Environmental precautions: Do not throw out into the environment.
- Method of cleaning up: The leaked solid is moved to a container. The leaked place is wiped off with dry cloth.
- Prevention of secondary hazards: Avoid re-scattering. Do not bring the collected materials close to fire.

7. Handling and Storage

Handling: No special protective clothing required for handling individual cells.

Storage: Store in a cool, dry place.

8. Exposure Controls / Personal Protection

Engineering controls: Keep away from heat and open flame. Store in a cool dry place.

Personal Protection:

Respirator: Not required during normal operations. SCBA required in the event of a fire.

Eye/face protection: Not required beyond safety practices of employer.

Gloves: Not required for handling of cells.

Foot protection: Steel toed shoes recommended for large container handling.

9. Physical and Chemical Properties

Appearance

Physical state : Solid

Form : Cylindrical (Single cell) Color : Metallic color (without tube) Odor : No odor

Nominal voltage : 3.6 volts (Single cell)

pH : NA

Specific temperatures/temperature ranges at which changes in physical state occur. There is no useful information for the product as a mixture.

Flash point : NA

Explosion properties : NA

Density : NA

Solubility ,with indication of the solvent(s) : Insoluble in water

10. Stability and Reactivity

- Stability: Stable under normal use
- Hazardous reactions occurring under specific conditions
 - Conditions to avoid : When a battery cell is exposed to an external short-circuit, crushes, modification, high temperature above 100 degree C, it will be the cause of heat generation and ignition. Direct sunlight and high humidity.
 - Materials to avoid : Conductive materials, water, seawater, strong oxidizers and strong acids.
 - Hazardous decomposition products : Acrid or harmful gas is emitted during fire.

11. Toxicological Information

This product does not elicit toxicological properties during routine handling and use.

Sensitization	Teratogenicity	Reproductive toxicity	Acute toxicity
NO	NO	NO	NO

If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.

12. Ecological Information

Persistence/degradability: Since a battery cell and the internal materials remain in the environment, do not bury or throw out into the environment.

13. Disposal Considerations

Recommended methods for safe and environmentally preferred disposal :

Product (waste from residues)

Do not throw out a used battery cell. Recycle it through the recycling company.

Contaminated packaging

Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates, dispose as industrial wastes subject to special control.

14. Transport Information

Lithium Ion batteries are considered to be "Rechargeable batteries" and meet the requirements of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), The 50th edition of International Air Transportation Association (IATA, 2009) special provision A45/A154 and belong to non-dangerous goods.

15. Regulatory Information

DOT Hazard Class:

Regulated Nonregulated