



MATERIAL SAFETY DATA SHEET

1. Identification

Product name: Lithium-ion Polymer Battery

Model: 112739

Voltage: 3.7V

Capacity: 1200mAh

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Report No.: KANYO180105001

Company: Dongguan Kanyo Battery Technology Co.,Ltd.

Contact for information: Xinhua Road, Shayao Administrative District, Shijie Town, Dongguan City, Guangdong Province, P.R.China

Emergency telephone No.: 0086-769-89208898



2. Ingredients

危险成分 (化学名称) Hazardous Ingredients (Chemical Name)	含量及含量百分比(%) Concentration or concentration ranges (%)	CAS 编号 CAS Number
钴酸锂/ Lithium Cobalt Oxide	34.0%	12190-79-3
聚偏氟乙烯/ Polyvinylidene Fluoride(PVDF)	2%	24937-79-9
铝/ Aluminium(Al)	10%	7429-90-5
石墨/ Graphite	22%	7782-42-5
丁苯橡胶/ Styrene-Butadiene Rubber (SBR)	2%	9003-55-8
羧甲基纤维素/ Carboxymethylcellulose	1%	9004-32-4
铜/ Copper (Cu)	10%	7440-50-8
镍/ Nickel (Ni)	5%	7440-02-0
六氟磷酸锂/ Lithium Hexafluorophosphate	4%	21324-40-3
尼龙/ Nylon	1%	24937-16-4
Ethylene carbonate (EC)	3%	96-49-1
Polypropylene	2%	9003-07-0
Dimethyl carbonate(DMC)	4%	616-38-6

3. Hazards identification

Health Hazards (Acute and Chronic):



For the battery cell, chemical materials are stored in a hermetically sealed aluminum laminate 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, or added electric stress by misuse the cell case will be breached and hazardous materials may be released. Moreover, if heated strongly by the surrounding fire, acrid gas may be emitted.

Carcinogenicity:

NTP: None IARC Monograph: None OSHA Regulated: None

Medical Conditions Generally Aggravated by Exposure:

An acute exposure will not generally aggravate any medical condition. Human health effects:

Inhalation: The steam of the electrolyte has an anesthesia action and stimulates a respiratory tract.

Skin contact: The steam of the electrolyte stimulates a skin. The electrolyte skin contact causes a sore and the stimulation on the skin.

Eye contact: The steam of the electrolyte stimulates eyes. The electrolyte eye contact causes a sore and the stimulation on the eye. Inflammation of the eyes may occur.

Environmental effects:

Since a battery cell remains in the environment, do not throw out it into the environment.

Specific hazards:

If the electrolyte contacts with water, it may generate detrimental hydrogen fluoride. Since the leaked electrolyte is inflammable liquid, do not bring close to fire.

4. First aid measures

After inhalation contact: Make the victim blow his/her nose, gargle. Seek medical attention if necessary.

After skin contact: Remove contaminated clothes and shoes immediately. Immediately wash extraneous matter or contact region with soap and plenty of water.

After eye contact: Do not rub eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention.

After ingestion contact: Make the victim vomit. Immediately seek medical attention.

5. Fire-fighting measures

Extinguishing Media: Plenty of water, CO₂ gas, nitrogen gas, chemical powder fire extinguishing medium and fire foam.



Specific methods of simultaneously:	When the battery burns with other combustibles fire-fighting: take fire extinguishing method which corresponds to the combustibles. Extinguish a fire from the windward as much as possible.
Flammable Limits:	Not available

6. Accidental release measures

The preferred response is to leave the area and allow the batteries to cool and the vapors to dissipate. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

7. Handling and storage

Handle with care. Flammability hazard exists if the package is damaged. Before shipping, must to check out the package is damaged or not by inspection, if package damaged, must to be repacking. Avoid mechanical or electrical abuse. Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

8. Exposure controls/personal protection

Specific control parameter:

Personal protective equipment :

Respiratory protection (Specify Type):	Not necessary under conditions of normal use.
Ventilation:	Not necessary under conditions of normal use.
Protective Gloves:	Not necessary under conditions of normal use.
Eye protection:	Not necessary under conditions of normal use.
Other Protective : (Clothing or Equipment):	Not necessary under conditions of normal use

9. Physical and chemical properties

Appearance

Physical state:	Solid
Form:	Prismatic (Laminated)
Color:	Metallic color
Odor:	No odor
PH	N/A
Specific temperatures N/A	Temperature ranges changes in physical state occur. Flash point
Explosion properties	N/A
Density	N/A
Solubility	with indication of the solvent(s): Insoluble in water



10. Stability and reactivity

- Stability: Stable
- Conditions to Avoid: When cell is exposed to an external short-circuit, crushes, deformation, high temperature above 100 degree C, it will cause heat generation and ignition. Avoid direct sunlight and high humidity.
- Hazardous Decomposition or By-products: Acrid or harmful gas is emitted during fire.
- Materials to avoid: Conductive materials, water, seawater, strong oxidizers and strong acids.
- Hazardous polymerization will not occur.

11. Toxicological information

- Acute toxicity:
- Copper 60-100mg sized coarse particulate causes a gastrointestinal disturbance with nausea and inflammation. TDLo, hypodermic - Rabbit 375mg/kg
- Organic electrolyte LD50, oral - Rat 2,000mg/kg or more
- Further toxicological information:
- Aluminum By the long-term inhalation of coarse particulate or fume, it is possible to cause lung damage (aluminum lungs).
- Lithium Cobaltate By the long-term inhalation of coarse particulate or vapor of cobalt, it is possible to cause the serious respiratory-organs disease. Skin reaction or a lung disease for allergic or hypersensitive person may be caused.
- Graphite Long-term inhalation of high levels of graphite coarse particulate may cause lung disease or a tracheal disease.

12. Ecological information

- Ecotoxic effects : N/A
- Further ecological data: N/A

13. Disposal considerations

KANYO encourages battery recycling. Our polymer Li-ion batteries are recyclable through the Rechargeable Battery Recycling Corporation's (RBRC) Charge Up to Recycle Program.. For information call 1-800-8-BATTERY or see their website at www.rbrc.org. Polymer Li-ion batteries must be handled in accordance with all applicable state and federal laws and regulations.

DO NOT INCINERATE or subject battery cells to temperatures in excess of 212° F. Such treatment can vaporize the liquid electrolyte causing cell rupture. Do not use in combination with fresh and used lithium batteries neither with other type of battery.

14. Transport information



Label for conveyance: Lithium Ion Battery Label

UN Number:UN3480 or UN3481

Packing Group:N/A

Ems No: F-A,S-1

Marine pollutant:No

Proper Shipping name:

Lithium ion batteries (including Lithium ion polymer batteries) or Lithium ion batteries contained in equipment.(including Lithium ion polymer batteries)

Hazard Classification:

The goods shall be complied with the requirements of Section II (or Section IB) of Packing Instructions 965-967 of 59th DGR Manual of IATA(2018 edition),including the passing of the UN38.3 test. And also complies with the Special Provision 188 of IMDG CODE (Amdt.37-14)2014 Edition. The products are not subject to dangerous goods.

Inspection according to:

EEC Directive 93/112/EC

15. Regulatory information

Law information

《Dangerous Goods Regulations》

《Recommendations on the Transport of Dangerous Goods Model Regulations》

《International Maritime Dangerous Goods》

《Technical Instructions for the Safe Transport of Dangerous Goods》

《Classification and code of dangerous goods》

《Occupational Safety and Health Act》 (OSHA)

《Toxic Substance Control Act》 (TSCA)

《Consumer Product Safety Act》 (CPSA)

《Federal Environmental Pollution Control Act》 (FEPCA)

《The Oil Pollution Act》 (OPA)

《Superfund Amendments and Reauthorization Act TitleIII (302/311/312/313)》 (SARA)

《Resource Conservation and Recovery Act》 (RCRA)

《Safety Drinking Water Act》 (CWA)

《California Proposition 65》

《Code of Federal Regulations》 (CFR)

In accordance with all Federal, State and local laws.

16.Other Information

This information is not effective to all the batteries manufactured by KANYO. This information comes from reliable sources, but no warranty is made to the completeness and accuracy of information contained. KANYO doesn't assume responsibility for any damage or loss because of misuse of batteries. Users should grasp the correct use method and be responsible for the use of batteries.

NOTICE: The information and recommendations set forth are made in good faith and are believed to be accurate at the date of preparation. Dongguan KANYO Battery Technology Co.,Ltd makes no warranty expressed or implied.

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