



東莞市金源電池科技有限公司
KANYO BATTERY TECHNOLOGY CO.,LTD

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MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME: Li-ion Battery

MODEL:904169_1S1P

VOLTAGE:3.7V

CAPACITY:3000mAh

ELC=3.7V×3.0Ah=11.1WATT-HOURS=0.888g ELC

**8g Equivalent Lithium Content=100Watt-hours.

EDITION DATE: 2014-2-13

2. INGREDIENTS

Chemical Composition	Molecular Formula	Weight%	CAS No	OSHA (PEL)	ACGIH (TLV)
Lithium Cobalt Oxide	LiCoO ₂	25~30%	12190-79-3	N/A	N/A
Polyvinylidene fluoride	(CH ₂ CF ₂) _n	0.5~2%	24937-79-9	N/A	N/A
Graphite powder	C	15~20%	7782-42-5	N/A	N/A
Electrolyte	LiPF ₆ C ₄ H ₁₀ O ₅ C ₄ H ₈ O ₅ C ₃ H ₈ O ₅	10~15%	21324-40-3	N/A	N/A
Polyethylene	(C ₂ H ₄) _n	0.5~1%	9002-88-4	N/A	N/A
Copper foil	Cu	5~10%	7440-50-8	N/A	N/A
Nickel	Nickel	5~10%	7440-02-0	N/A	N/A
Iron	Fe	15~20%	7439-89-6	N/A	N/A
Aluminum foil	Al	5~10%	7429-90-5	N/A	N/A

3. *Source: Technique engineer of Dongguan KANYO Battery Technology Co.,Ltd and material supply factory houses.

4. PHYSICAL DATA

Boiling Point@760mmHg(°C)	NA
Vapor Pressure(mm Hg@25°C)	NA
Vapor Density(Air=1):	NA
Density(grams/cc):	NA
Percent Volatile by Volume(%)	NA
Evaporation Rate(Buty Acetate=1)	NA
Physical State:	NA
Solubility in Water(%by Weight):	NA
pH:	NA





Appearance and Odor	Geometric solid object
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5. Fire & EXPLOSION HAZARD DATE

FLASH POINT: NA LOWER (LEL): NA
FLAMMABLE LIMITS IN AIB (%): NA UPPER (UEL): NA
EXTINGUISHING MEDIA: Use water, foam or dry powder, as appropriate
AUTO-IGNITION: NA

SPECIAL FIRE FIGHTING PROCEDURES: As with ant fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products (See section2).

SPECIAL FIRE EXPLOSION HAZARDS: Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.

6. HEALTH HAZARD DATE

THRESHOLD LIMIT VALUE (TLV)AND SOURCE:NA EFFECTS OF OVERREXPOSURE:

None.(In fire or rupture situation see section 2 and section 4) EMERGENCY FIRST AID

PROCEDURES: Skin and Eyes: In the event that battery ruptures, flush exposed skin with copious quantities of flowing lukewarm water for a minimum of 15 minutes. Get immediate medical attention for eyes. Wash skin with soap and water. For more

information,visit:http://www.nema.org/index_nema.cfm/666

7. REACTIVITY DA STABLE OR UNSTABLE:

STABLE OR UNSTABLE:	Stable
INCOMPATIBILITY (MATERIALS TO AVOID):	NA
HAZARDOUS DECOMPOSITION PRODUCTS:	NA
DECOMPOSITION TEMPERATURE (0°F);	NA
HAZARDOUS POL YMERIZATION:	Will Not Occur
CONDITIONS TO AVOID:	Avoid electrical shorting.

8. Handing and storage

Handing

Avoid mechanical electrical abuse. DO NOT short or install incorrectly. Batteries may explode, pyrolyze or vent if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions. Replace all batteries in equipment at the same time.

Handwritten red stamp or signature on the right margin.



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Do not carry batteries loose in pocket or bag.

Storage

Store at room temperature.

9. SPILL OR LEAK PROCEDURES

PROCEDURES TO CONTAIN AND CLEAN AND CLEAN UP LEAKS OR SPILLS: In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container.

REPORTING PROCEDURE: Report all spills in accordance with Federal, State and Local reporting requirements.

WASTE DISPOSAL METHOD: Waste Lithium Ion Batteries are NOT considered a USEPA Hazardous Waste (at this time). Their collection and recycling are not required under US Federal Law. Contact your battery distributor for details regarding recycling options or visit: <http://www.rbrc.org> .For additional info. On disposal or recycling options, visit: <http://www.rayovac.com/about/environmental/faq.shtml>.

10. PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): NA
VENTILATION: Local Exhaust: NA
Mechanical (General): NA
Special: NA
Other: NA
PROTECTIVE GLOVES: NA
EYE PROTECTION: NA
OTHER PROTECTIVE CLOTHING: NA

11.Toxicological information

Toxicity information is available on battery ingredients noted in Section 2, but, generally not applicable to intact batteries as used by customers.

12.Ecological information

None available regarding product.

13.Regulatory information

EC Labeling: None
Risk Phrases: None
Safety Phrases: None





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Labeling is not required because Batteries are classified as "articles" under the Dangerous Preparations Directive as such are exempt from the requirements of the Directive.

14. SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Store in a dry place. Storing unpackaged cells together could result in cell shorting and heat build-up. Keep battery terminals insulated when in storage or transportation.

15. Transport Information

TRANSPORTATION-SHIPPING: For the international transport of lithium batteries, they must comply with these regulations: the International Maritime Dangerous Goods (IMDG) Code by International Maritime Organization (IMO), Dangerous Goods Regulations (DGR) by International Air Transport Association (IATA) and Technical Instructions for the Safe Transport of Dangerous Goods by Air (TI) by International Civil Aviation Organization (ICAO). These regulations are based on the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria.

According to PACKING INSTRUCTION PI965 ~ PI970 Section II of IATA DGR 55th Edition for transportation, Lithium batteries which meet the requirements of UN38.3 (UN Manual of Tests and Criteria, Part III, subsection 38.3) could be transported by air and by sea as ordinary goods, otherwise should be transported according to Class 9, Packing Group II hazardous goods.

For lithium ion batteries the UN number is UN3480; for Lithium ion batteries contained in or packed with equipment, the UN number is UN3481.

Except when installed in equipment, for air shipment that contained one or more cells, they are necessary to meet the following items:

1. Each consignment must be accompanied with a document such as air waybill with an indication that:
 - The package contains lithium ion battery



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- The package must be handled and that a flammability hazard exists if the package is damaged
 - Special procedures should be followed in the event the package is damaged, to include inspection and repacking if necessary
 - A telephone number for additional information
2. Each package must be labeled with a lithium ion battery handling label.
 3. Each package must be capable of withstanding a 1.2m drop test in any orientation.
 4. Lithium ion battery is within the watt-hour rating, not exceed 100 watt-hour.
 5. The shipment does not contain damaged, defective or recall batteries.

Transport Fashion: By air, By sea

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.