

MSDS Report

Samples: Rechargeable Li-ion Battery GT6SS

Supplier Unit: SUNWODA ELECTRONIC CO., LTD

Supplier Address: No.2, Yihe Rd, Shilong Community, Shiyuan Street,
Baoan District, Shenzhen City, China

MSDS No.: MSDS2024010303

Release Date: Jan. 3, 2024



Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Product Name: Rechargeable Li-ion Battery

Sample Code: G823-00368-01

Manufacturer: SUNWODA ELECTRONIC CO., LTD

Address: No.2, Yihe Rd, Shilong Community, Shiyan Street, Baoan District, Shenzhen City,

China

Post Code: 518108

Tel: 0755-29516888

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地址：中国深圳市宝安区石岩街道石龙社区颐和路2号

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Section 2 – Hazards Identification

Health Hazards (Acute and Chronic)

These chemicals are contained in a sealed can .Risk of exposure occurs only if the battery is mechanically or electrically abused. Contact of electrolyte and extruded lithium with skin and eyes should be avoided.

Sign/Symptoms of Exposure

A shorted lithium battery can cause thermal and chemical burns upon contact with the skin. May be a reproductive hazard.

Section 3 – Composition/Information on Ingredient

主要成分	CAS NO.	wt%
Lithium cobaltate 钴酸锂	12190-79-3	30~50
Graphite 石墨	7782-42-5	15~30
Aluminium 铝	7429-90-5	5~10
Copper 铜	7440-50-8	5~10
Carbon Black 炭黑	1333-86-4	0~2
Carboxymethyl cellulose 羧甲基纤维素	9004-32-4	0~1
POLY(PROPYLENE-CO-ETHYLENE) 1-丙烯与乙烯的聚合物	9010-79-1	0.3~1.5
Polyvinylidene fluoride 聚偏氟乙烯树脂	24937-79-9	0~2
Benzene, ethenyl-, with 1,3-butadiene 聚苯乙烯丁二烯共聚物	9003-55-8	0~1.5
Aluminum oxide (Al ₂ O ₃) (9CI) 氧化铝	11092-32-3	0~1.5
polyethylene 聚乙烯	9002-88-4	0~1
Nickel 镍	7440-02-0	0.1~2
4-Fluoro-1,3-dioxolan-2-one 氟代碳酸乙烯酯	114435-02-8	0-5
Ethylene carbonate 碳酸乙烯酯	96-49-1	0-10
Diethyl carbonate 碳酸二乙酯	105-58-8	0-10
Propylene carbonate 碳酸丙烯酯	108-32-7	0-10
Lithium hexafluorophosphate 六氟磷酸锂	21324-40-3	0~5
1,3-Propanesultone 1,3-丙烷磺内酯	1120-71-4	0-0.5

Section 4 – First Aid Measures

Eyes

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Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin

Remove contaminated clothes and rinse skin with plenty of water of shower for 15 minutes. Get medical aid.

Inhalation

Remove from exposure and move to fresh air immediately. Use oxygen if available.

Ingestion

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

Section 5 – Fire Fighting Measures

Flash Point: N/A

Auto-Ignition Temperature: N/A

Extinguishing Media: Dry powder, CO₂

Special Fire-Fighting Procedures: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Cell may vent when subjected to excessive heat exposing battery contents.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

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Section 6 – Accidental Release Measures

Steps to be Taken in case Material is Released or Spilled

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 batteries 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.

Waste Disposal Method

It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

Section 7 – Handling and Storage

The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.

Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire.

Do not crush or puncture the battery, or immerse in liquids.

Precautions to be taken in handling and storing

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.

Other Precautions

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Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Section 8 –Exposure Controls, Personal Protection

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory Protection is not necessary under conditions of normal use.

Ventilation

Not necessary under conditions of normal use.

Protective Gloves

Not necessary under conditions of normal use.

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

Protection, Protective Gloves, Protective

Clothing and safety glass with side shields.

Section 9 –Physical and Chemical Properties

Nominal Voltage: 3.88V

Rated Capacity: 3267mAh

Appearance characters: odorless, solid battery.

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Section 10 –Stability and Reactivity

Stability

Stable

Conditions to Avoid

Heating, mechanical abuse and electrical abuse.

Hazardous Decomposition Products N/A.

Hazardous Polymerization N/A.

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

Section 11 –Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened.

Exposure to internal contents, the corrosive fumes will be very irritating to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrosis lung injury and membrane irritation.

Section 12 –Ecological Information

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

Section 13 –Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARTION

If batteries are still fully charged or only partially discharged, they can be considered a reactive hazardous waste because of significant amount of not creation, or unconsumed lithium

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remaining in the spent battery. The batteries must be neutralized through an approved secondary treatment facility prior to disposal as a hazardous waste. Recycling of battery can be done in authorized facility, through licensed waste carrier.

Section 14 –Transport Information

The battery models listed have a Watt-hour rating of no more than 100Wh.And shipment contains no item listed under IATA DGR Special Provision A154 and meets all requirements under UN Manual of Tests and Criteria Part III, subsection 38.3.

No	ITEMS	RESULT	REMARKS
1	Altitude simulation	Pass	Test1 to 5 must be conducted in sequence on the same cell or battery
2	Thermal test	Pass	
3	Vibration	Pass	
4	Shock	Pass	
5	External short circuit	Pass	
6	Impact	Pass	
7	Overcharge	Pass	Only battery do need this test item
8	Forced discharge	Pass	

Each package is capable of withstanding a 1.2m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents. Package does not exceed 10kg gross mass.

The International Air Transport Association (IATA) Dangerous Goods Regulations (65th Edition,

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2024).Packing instruction 965 Section IB for Lithium ion battery. (When shipping batteries" packing with" or "contained in" equipment, use packing instruction 966 or 967 as appropriate).

And the net quantity of lithium ion batteries (or cells) does not exceed 5Kg (Passenger aircraft) or 35Kg (Cargo Aircraft Only)

The article is not restricted to other provisions of IMO IMDG Code (Amend.41-22, 2022 Edition) According to special provision 188.

The product is not subject to the other provisions of RID/ADR Code (2023 Edition) according to Special Provision 188.

Packaging complies with the requirements of the International Civil Aviation Organization (ICAO) Technical Instructions (2023-2024 Edition).

More information concerning shipping, testing, marking and packaging can be obtained from Label master at <http://www.labelmaster.com>.

Separate battery when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain.

Label for conveyance: Lithium Battery Mark, Class 9 Lithium Battery Hazard Label, Cargo Aircraft Only Label

Packaging Group:N/A

Hazard Class: Class 9

UN Number: UN3480

Marine pollutant: No

Proper Shipping name: Lithium-ion batteries (Including lithium-ion polymer batteries)

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Hazard Classification: The goods are complied with the requirements of Section IB of Packing Instructions 965 of 65th DGR Manual of IATA (2024 Edition) , Special provision 188 of IMDG CODE (Amend. 41-22) (2022 Edition), including the passing of the UN38.3 test.

Label for conveyance: Lithium Battery Mark

Packaging Group: N/A

Hazard Class: Class 9

UN Number: UN3481

Marine pollutant: No

Proper Shipping name: Lithium ion batteries packed with equipment

Hazard Classification: The goods are complied with the requirements of Section II of Packing Instructions 966 of 65th DGR Manual of IATA (2024 Edition) , Special provision 188 of IMDG CODE (Amend. 41-22) (2022 Edition), including the passing of the UN38.3 test.

Label for conveyance: Lithium Battery Mark

Packaging Group: N/A

Hazard Class: Class 9

UN Number: UN3481

Marine pollutant: No

Proper Shipping name: Lithium-ion batteries contained in equipment.

Hazard Classification: The goods are complied with the requirements of Section II of Packing Instructions 967 of 65th DGR Manual of IATA (2024 Edition) , Special provision 188 of IMDG CODE (Amend. 41-22) (2022 Edition), including the passing of the UN38.3 test.

Transport Fashion: By air or sea

Section 15 –Regulatory Information

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Law Information

《Dangerous Goods Regulation》

《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 Substances Control Act》 (TSCA)

《Consumer Product Safety Act》 (CPSA)

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Section 16 –Additional Information

The above information is based on the date of which we are aware and is believed to be correct as of data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material of his particular purpose.

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