MSDS Report

Samples: Rechargeable Li-ion Battery G07DF

Supplier Unit: SUNWODA ELECTRONIC CO., LTD

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

MSDS No.: MSDS2024010101

Release Date: Jan. 1, 2024



地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Product Name: Rechargeable Li-ion Battery

Product Code: G07DF

Sample Code: G823-00410-00

Manufacturer: Zhejiang Sunwoda Electronic Co., Ltd.

Address:Building 3 and building 4, No.111 Yanzhou Rd., Lanjiang St.,Lanxi County, Jinhua City, Zhejiang Province.

Post Code: 518108

Tel: 0755-29516888

Emergency Telephone: 0755-29516888

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

Fax: 0755-29516999

E-mail: zhangyuxia@sunwoda.com

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

Section 2 – Composition/Information on Ingredient

化学名称 Common Chemical Name	化学式 Chemical Formula	CAS 号 CAS No.	EC 号 EC No.	重量含量 Wt %
铝箔 Aluminum Foil	Al	7429-90-5	231-072-3	3.6
钴酸锂 Lithium Cobalt Oxide	$LiCoO_2$	12190-79-3	235-362-0	40.5
聚偏二氟乙烯 Polyvinylidene Fluoride(PVDF)	$(CH_2\text{-}CF_2)n$	24937-79-9	607-458-6	0.54
丁苯橡胶 Styrene Butadiene Rubber(SBR)	$(C_8H_8C_4H_6)x$	9003-55-8	618-370-2	0.28
铜箔 Copper Foil	Cu	7440-50-8	231-159-6	6.6
石墨 Graphite	C	7782-42-5	231-955-3	22.6
六氟磷酸锂 Lithium Hexafluorophosphate	$LiPF_6$	21324-40-3	244-334-7	1.8
1，3 丙烷磺酸内酯 1,3-Propane sultone	PS	1120-71-4	214-317-9	0.5
其他 Other	-	-	-	23.58
铅 Lead	Pb	7439-92-1	231-100-4	Not Detected
镉 Cadmium	Cd	7440-43-9	231-152-8	Not Detected
汞 Mercury	Hg	7439-97-6	231-106-7	Not Detected

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

Section 3 –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 4 – First Aid Measures

Eyes

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, CO_2

Special Fire-Fighting Procedures: Self -contained breathing apparatus.
Unusual Fire and Explosion Hazards: Cell may vent when subjected to excessive heatexposing battery contents.

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

Section 6 – Accidental Release Measures

Steps to be Taken in case Material is Released of 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

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: 3.87V

Rated Capacity: 4404mAh

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

Appearance characters: odorless, solid battery.

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 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 charge	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, 2024). Packing instruction 965 Section IA or 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: II
Hazard Class：Not restricted
UN Number: UN3480
Marine pollutant: No
Proper Shipping name: Lithium-ion batteries (Including lithium-ion polymer batteries)
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: II
Hazard Class：Not restricted

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

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 IB 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，Class 9 lithium battery hazard label， Cargo Aircraft Only Label.
Packaging Group: II
Hazard Class：Not restricted
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 IB 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 by sea or by road

Section 15 –Regulatory Information

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》

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

《Occupational Safety and Health Act》(OSHA)

《Toxic Substances Control Act》(TSCA)

《Consumer Product Safety Act》(CPSA)

《Federal Environmental Pollution Control Act》(FEPCA)

《The Oil Pollution Act》(OPA)

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

《Resource Conservation and Recovery Act》(RCRA)

《Safety Drinking Water Act》(CWA)

《California Proposition 65》

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999

《Code of Federal Regulations》(CFR)

In accordance with all Federal, State and Local laws.

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.

地址：中国深圳市宝安区石岩街道石龙社区颐和路 2 号
Address: No.2,Yihe Rd,Shilong Community,Shiyan Street,Baoan District,Shenzhen City,China

TEL：86-755-29516888 FAX：86-755-29516999