

Material Safety Data Sheet

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Section 1 – Chemical Product and Company Identification

Product Name: Rechargeable Li-ion Battery

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



Section 2 – Composition/Information on Ingredient

2.1 ATL Cell

Hazardous Ingredients	%	CAS Number
Graphite	7-25	7782-42-5
Lithium Cobalt Oxide	15-40	12190-79-3
Lithium Hexafluorophosphate(1-)	0-5	21324-40-3
Diethyl Carbonate	0-15	105-58-8
Propylene Carbonate	0-15	108-32-7
Ethylene Carbonate	0-15	96-49-1
Copper	10-12	7440-50-8
Aluminum	3-5	7429-90-5
Nickel	0-1	231-111-4

2.2. LSN Cell

Hazardous Ingredients	%	CAS Number
Lithium Cobaltite	41	12190-79-3
Graphite Carbon	21	7782-42-5
Lithium Hexafluorophosphate	4	21324-40-3
Organic solvent	14	
Non-Hazardous	20	

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2.3.Coslight Cell

Hazardous Ingredients	%	CAS Number
Graphite	7-25	7782-42-5
Lithium Cobalt Oxide	15-40	12190-79-3
Hexafluoropropylene-vinylidene fluoride 9011-	3-15	9011-17-0
Lithium Hexafluorophosphate	0-5	21324-40-3
Acetylene Black	0-2	1333-86-4
Diethyl Carbonate	0-15	105-58-8
Dimethyl Carbonate	0-15	616-38-6

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

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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.

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

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

State	Solid
Odor	N/A
PH	N/A
Vapor pressure	N/A
Vapor density	N/A
Boiling point	N/A
Solubility in water	Insoluble
Specific gravity	N/A
Density	N/A

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	Crush	Pass	
	Impact	N/A	
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. Net quantity of package does not exceed 10kg.

Packaging complies with the requirements of section IB of Packing Instructions 965 of 61st DGR Manual of IATA and section II of PI965~PI967 of 61st.

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

The article is not subject to other provisions of IMO IMDG Code according to special provision 188.

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.

Transport Fashion: By air or sea.

Section 15 –Regulatory Information

Canadian Federal Regulations:

These products have been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

WHMIS Classification: Not Controlled, manufactured article.

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New Substance Notification Regulations: Lithium hexafluorophosphate is listed on the Non-Domestic Substance List (NDSL). All other ingredients in the product are listed, as required, on Canada's Domestic Substances List (DSL)

National Pollutant Release Inventory (NPRI) Substances: These products do not contain any NPRI chemicals.

United States Federal and State Regulations:

TSCA Status: All ingredients in these products are listed on the TSCA inventory.

OSHA: These products do not meet criteria as per Part 1910.1200, manufactured article.

SARA EPA Title III: None.

Sec. 302/304: None.

Sec. 311/312: None.

Sec. 313: None.

CERCLA RQ: None

Australia and New Zealand

SUSMP: Not applicable

AICS: All ingredients are on the AICS list.

HSNO Approval number: Not applicable

HSNO Group Title: Not applicable

NOHSC: 10008 Risk Phrases: R34 - Causes Burns.

NOHSC: 1008 Safety Phrases:

S1 – Keep locked up.

S2 – Keep out of reach of children.

S23 – Do not breathe vapor.

S24/25 – Avoid contact with skin and eyes.

S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S27/28 – After contact with skin, take off immediately all contaminated clothing and wash immediately with plenty of water.

S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.

S56 – Dispose of this material and its container at hazardous waste or special waste collection point.

S62 – If swallowed, DO NOT induce vomiting: seek medical advice immediately and show this container or label.

S64 – If swallowed, rinse mouth with water (Only if the person is conscious).

EC Classification for the Substance/Preparation:

These products are not classified as hazardous according to Regulation (EC) No. 1272/2008.

Keep out of the reach of children.

EU Restrictions on use:

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended:

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Aluminium (CAS 7429-90-5)

Other EU Regulations

This Safety Data Sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Japanese Regulations

Japanese Industrial Standards (JIS) JIS Z 7253:2012

Waste disposal and public cleaning law

Law for Promotion of Effective Utilization of Resources

Taiwanese Regulations

Regulation of Labelling and Hazard Communication of Dangerous and Harmful Materials: Labeling requirements and other relevant provision of chemicals, this product is not classified as dangerous goods. Toxic Chemicals Substance Control Law: Not Listed.

CNS 1030016 Safety of primary and secondary lithium cells and batteries during transport.

Chinese Regulations

General Rule for Classification and Hazard Communication of Chemicals (GB 13690-2009):

Specifies the classification, labeling and hazard communication of chemicals in compliance with the GHS standard for chemical production sites and labeling of consumer goods.

General Rule for Preparation of Precautionary Labels for Chemicals (GB 15258-2009): Specifies the relevant application methods of precautionary labels for chemicals.

Safety Data Sheet for Chemical Products Content and Order of Sections (GB/T 16483-2008)

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 the 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.

17. Appendix**Further Information**

Model Name	Dell Part Number	Nominal Voltage	Rated Capacity	Wh Rating
YRDD6	WJPC4	11.4V	3500mAh	42Wh
JPFMR	65N6H	11.4V	3500 mAh	42 Wh

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3HWPP	JG75F	15.2V	4250mAh	68Wh
JK6Y6	5NDNH	11.25v	3378 mAh	40 Wh
H5CKD	7T8CD	15V	3360mAh	53 Wh



Safety Data Sheet – Appendix A

Subject: Amendment to original SDS prepared by the manufacturer

Section 1. Identification

In addition to the information in **1. Identification** section of the original manufacturer prepared SDS, the following information also applies for Dell products:

Supplier's Details

Supplier's Details	Dell Inc. One Dell Way Round Rock, TX 78682	For Australia only Supplier's Details	Dell Australia Pty Limited Building 3 14 Acquatic Drive French's Forest Sydney, NSW Postcode 2086 +(61) 2 8223 9403
Emergency telephone number	CHEMTREC North America 800-424-9300 International 1-703-527-3887	Australia Emergency Telephone number	CHEMTREC Australia (Sydney) +(61) 2 90372994
Prepared by	Global Product Compliance, Dell Inc.		