

Name of Supplier: SunwodaElectronic Co.,Ltd
Manufacturer's Name: SunwodaElectronic Co.,Ltd
Address: No.2,Yihe Rd.,Shilong Cummunity,Shiyan Street,Baoan District,Shenzhen,China
Tel: 0755-29516888 Fax: 0755-29517078

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Explanatory sheet about safety of product for transportation

(Safety Data Sheet for transportation)

1. Basic item

Product name: Rechargeable Li-Polymer Battery pack

UN number: 3480

Product code: Refer to Table 1.

model name: Refer to Table 1.

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2. Product information

Basic composition of the product This product is a battery which consists of such main component as core battery pack assembled with some Lithium ion cells. And it consists of any combination of plastic casing, tube casing, protection circuit boards, safety devices and interface terminals

3. Safety Information

Sunwoda certifies the battery has passed and satisfied the UN Manual of Tests and Criteria Part III, sub-section 38.3 testing in Sunwoda shipping. - Sunwoda manufactured the battery under the quality management program required in UN Model regulations 2.9.4(e)..

3-1 : Battery pack

1. The Watt-hour rating of the battery is not more than 100Wh.

The Watt-hour rating of the component Lithium ion cells is not more than 20Wh.

Refer to Appendix "MSDS(202401001)".

2. Packages of the battery satisfy the following conditions when Sunwoda ships.

(1) The package has passed the drop test from the height of 1.2m.

(2) The package net weight is not more than 10kg.

(3) The package is marked and labeled according to requirement of Packing Instruction 965 Section IB stated in ICAO's and IATA's dangerous goods regulations.

3. The battery is not defective for safety reasons, not damaged. It is not collected battery for recycling or disposal.

4. The battery is not subject to the fully regulated requirements for Dangerous Goods in ocean and ground transportation.

5. The battery should be transported by Cargo aircraft as UN3480, Class 9 Dangerous Goods, and state of charge not exceeding 30%, according to Packing Instruction 965 Section IB stated in ICAO's and IATA's dangerous goods regulations.

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Table. 1 Model list of application

ASSM PN	FRU PN	Battery Model	WH Rating	Weight (g)	Li Content (g)	Cell Voltage (VDC)	Battery Voltage	Battery Supplier	SDS File	UN38.3 File
5B10U65275		L19D4PD1	60	250	4.69	3.84	7.68	SWD	MSDS_202401001	5B10U65275_UN38.3
SB10T83121		L18D4P90	46	191	3.59	3.84	15.36	SWD	MSDS_202401001	SB10T83121_UN38.3
SB10X02605	5B10X02594	L19D3PD5	45	221	4.97	3.7	11.1	SWD	MSDS_202401001	SB10X02605_UN38.3
SB11N56336	5B11N56340	L19D3PD5	45	221	4.97	3.7	11.1	SWD	MSDS_202401001	SB11N56336_UN38.3
SB10Z21196	5B10Z21197	L19D3PDA	45	199	3.52	3.86	11.58	SWD	MSDS_202401001	SB10Z21196_UN38.3
SB11N52079	5B11N52052	L19D3PDA	45	199	3.52	3.86	11.58	SWD	MSDS_202401001	SB11N52079_UN38.3
SB10W51917	5B10W51816	L20D4P72	57	232.4	4.45	3.84	15.36	SWD	MSDS_202401001	SB10W51917_UN38.3
SB10W51977	5B10W51876	L21D4P74	57	272.1	4.45	3.84	15.36	SWD	MSDS_202401001	SB10W51977_UN38.3
SB11M89833	5B11M90032	L21D4P74	57	272.1	4.45	3.84	15.36	SWD	MSDS_202401001	SB11M89833_UN38.3
SB11H56237	5B11H56336	L21D4PG1	46	205.8	3.59	3.84	15.36	SWD	MSDS_202401001	SB11H56237_UN38.3
SB11D97144	5B11D97138	L21D4PH0	75	287	5.80	3.88	15.52	SWD	MSDS_202401001	SB11D97144_UN38.3
SB11N52021	5B11N52040	L21D4PH0	75	287	5.80	3.88	15.52	SWD	MSDS_202401001	SB11N52021_UN38.3
SB11F29418	5B11F29421	L21D4PE1	59	229	4.58	3.88	15.52	SWD	MSDS_202401001	SB11F29418_UN38.3
SB11N47449	5B11N47462	L21D4PE1	59	229	4.58	3.88	15.52	SWD	MSDS_202401001	SB11N47449_UN38.3
SB11F28678	5B11F28681	L21D3P70	49.57	200	3.84	3.87	11.61	SWD	MSDS_202401001	SB11F28678_UN38.3
SB11M89865	5B11M90064	L21D3P70	49.57	200	3.84	3.87	11.61	SWD	MSDS_202401001	SB11M89865_UN38.3
SB11F38375	5B11F38377	L21D2PG2	29	114	4.56	3.85	7.7	SWD	MSDS_202401001	SB11F38375_UN38.3
SB11F53995	5B11F54000	L21D4PC2	99.9	380	7.73	3.88	15.52	SWD	MSDS_202401001	SB11F53995_UN38.3
SB11N51741	5B11N51731	L21D4PC2	99.9	380	7.73	3.88	15.52	SWD	MSDS_202401001	SB11N51741_UN38.3
SB11K63023	5B11K63020	L22D3PG4	47	193.5	3.74	3.77	11.31	SWD	MSDS_202401001	SB11K63023_UN38.3
SB11N45976	5B11N46005	L22D3PG4	47	193.5	3.74	3.77	11.31	SWD	MSDS_202401001	SB11N45976_UN38.3
SB11K08436	5B11K08430	L22D3PG0	47	183.25	3.7404	3.77	11.31	SWD	MSDS_202401001	SB11K08436_UN38.3
SB11K38956	5B11K38961	L22D4PC0	80	340	6.2184	3.87	15.44	SWD	MSDS_202401001	SB11K38956_UN38.3
SB11N45409	5B11N45428	L22D4PC0	80	340	6.2184	3.87	15.44	SWD	MSDS_202401001	SB11N45409_UN38.3
SB11K38742	5B11K38744	L22D4PC2	80	334	6.2184	3.87	15.44	SWD	MSDS_202401001	SB11K38742_UN38.3

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SB11N453 99	5B11N454 32	L22D4PC2	80	334	6.2184	3.87	15.44	SWD	MSDS_20240100 1	SB11N45399_UN3 8.3
SB11H562 55	5B11H563 54	L22D3P71	47	183.65	3.7404	3.77	11.31	SWD	MSDS_20240100 1	SB11H56255_UN3 8.3
SB11H562 50	5B11H563 49	L22D3P70	46.5	195.96	3.762	3.77	11.31	SWD	MSDS_20240100 1	SB11H56250_UN3 8.3
SB11M898 01	5B11M90 000	L22D3P70	46.5	195.96	3.762	3.77	11.31	SWD	MSDS_20240100 1	SB11M89801_UN3 8.3
SB11H563 26	5B11H564 25	L21D4PG1	46	206	3.59	3.84	15.36	SWD	MSDS_20240100 1	SB11H56326_UN3 8.3
SB11K389 62	5B11K389 57	L22D4PC1	99.9	372	7.728	3.88	15.52	SWD	MSDS_20240100 1	SB11K38962_UN3 8.3
SB11N454 27	5B11N454 04	L22D4PC1	99.9	372	7.728	3.88	15.52	SWD	MSDS_20240100 1	SB11N45427_UN3 8.3
SB11K391 59	5B11K391 60	L22D4PC3	99.9	375.5	7.7052	3.89	15.56	SWD	MSDS_20240100 1	SB11K39159_UN3 8.3
SB11N459 92	5B11N459 66	L22D4PC3	99.9	375.5	7.7052	3.89	15.56	SWD	MSDS_20240100 1	SB11N45992_UN3 8.3
SB11K595 68	5B11K595 67	L22D2PH1	35.6	152.6	6.5	3.88	7.76	SWD	MSDS_20240100 1	SB11K59568_UN3 8.3
SB11K595 68	5B11K595 67	L22D2PH1	35.6	152.6	6.5	3.88	7.76	SWD	MSDS_20240100 1	SB11K59568_UN3 8.3
SB11L931 98	5B11L932 01	L22D4PE1	71	281.09	5.55	3.84	15.36	SWD	MSDS_20240100 1	SB11L93198_UN3 8.3
SB11N474 51	5B11N475 13	L22D4PE1	71	281.09	5.55	3.84	15.36	SWD	MSDS_20240100 1	SB11N47451_UN3 8.3
SB11M642 01	5B11M642 02	L23D4PH0	75	268.76	5.772	3.9	15.6	SWD	MSDS_20240100 1	SB11M64201_UN3 8.3
SB11H563 06	5B11H564 05	L23D3P76	58	242	4.498	3.87	11.61	SWD	MSDS_20240100 1	SB11H56306_UN3 8.3
SB11M375 49	5B11M37 553	L23D4P70	90	334.25	6.924	3.9	15.6	SWD	MSDS_20240100 1	SB11M37549_UN3 8.3
SB11H562 98	5B11H563 97	L23D3P71	57	226.4	4.536	3.77	11.31	SWD	MSDS_20240100 1	SB11H56298_UN3 8.3
SB11H562 95	5B11H563 94	L23D3P70	46.5	188.4	3.7	3.77	11.31	SWD	MSDS_20240100 1	SB11H56295_UN3 8.3
SB11H563 01	5B11H564 00	L23D3P73	57	235.15	4.536	3.77	11.31	SWD	MSDS_20240100 1	SB11H56301_UN3 8.3
SB11M754 92	5B11M75 491	L23D4PC3	99.9	373	7.705	3.89	15.56	SWD	MSDS_20240100 1	SB11M75492_UN3 8.3
SB11M646 11	5B11M64 606	L23D4PK5	80	333	6.2184	3.87	15.44	SWD	MSDS_20240100 1	SB11M64611_UN3 8.3
SB11P727 57	5B11P727 60	L23D4PH1	75	259.39	5.8	3.85	7.7	SWD	MSDS_20240100 1	SB11P72757_UN3 8.3
SB11Q465 69	5B11Q465 70	L24D4PH1	88	302.17	6.72	3.9	15.6	SWD	MSDS_20240100 1	SB11Q46569_UN3 8.3
SB11P714 55	5B11P714 53	L24D4PE1	85	290.79	6.54	3.9	7.8	SWD	MSDS_20240100 1	SB11P71455_UN3 8.3
SB11M898 96	5B11M900 95	L24D3P70	56.9	218	4.41	3.87	11.61	SWD	MSDS_20240100 1	SB11M89896_UN3 8.3
SB11M899 06	5B11M901 05	L24D3P73	56.9	218	4.41	3.87	11.61	SWD	MSDS_20240100 1	SB11M89906_UN3 8.3
SB11P446 15	5B11P446 13	L23D2PG5	29	109.01	2.24	3.85	7.7	SWD	MSDS_20240100 1	SB11P44615_UN3 8.3

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SB11Q325 33	5B11Q325 34	L24D3PF0	57.5	226.5	4.5	3.77	11.31	SWD	MSDS_20240100 1	SB11Q32533_UN3 8.3
SB11M899 18	5B11M901 17	L24D3P77	47	185	3.6432	3.77	11.31	SWD	MSDS_20240100 1	SB11M89918_UN3 8.3

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MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Product Identification:

Lithium-Ion Rechargeable Battery Pack

Cell Type: All Polymer models ATL manufactured

Cell manufacturers: Amperex Technology Limited

2. Hazards Identification

Class Name: Not applicable for regulated class

Hazard: It may cause heat generation or electrolyte leakage if battery terminals contact with other metals. Electrolyte is flammable.

In case of electrolyte leakage, move the battery from fire immediately.

Toxicity: Vapor generated from burning batteries, may make eyes, skin and throat irritate.

3. Composition / Identification on Ingredients

IMPORTANT NOTE:

The battery should not be opened or burned since the following ingredients contained within the battery that could be harmful under some circumstance if exposed or misused.

The cell contains neither metallic lithium nor lithium alloy.

Composition:

3-1. Cases: Plastic Not

dangerous 3-2. Printed Circuit Board Assembly Not

dangerous 3-3. Lithium Ion Cell:

MATERIAL OR INGREDIENT	PEL (OSHA)	TLV (ACGIH)	%/wt.
Graphite (CAS# 7782-42-5)	5 mg/m ³ TWA	2mg/m ³ TWA	7-25
Lithium cobalt (CAS# 12190-79-3)	0.1 mg/ m ³	0.02mg/ m ³	15-40
Lithium Hexafluorophosphate (CAS# 21324-40-3)	None established	None established	0-5
Acetylene Black (CAS# 1333-86-4)	3.5 mg/ m ³ TWA (as carbon black)	3.5 mg/ m ³ TWA (as carbon black)	0-2
Diethyl Carbonate (CAS# 105-58-8)	None established	None established	0-15

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Dimethyl Carbonate (CAS# 616-38-6)	None established	None established	0-15
Ethyl Methyl Carbonate (CAS# 623-53-0)	None established	None established	0-15
Propylene Carbonate (CAS# 108-32-7)	None established	None established	0-15
Ethylene Carbonate (CAS# 96-49-1)	None established	None established	0-15

4. First Aid Measures

The product contains organic electrolyte. In case of electrolyte leakage from the battery, actions described below are required.

Eye contact: Flush the eyes with plenty of clean water for at least 15 minutes immediately, without rubbing, and call a doctor. If appropriate procedures are not taken, this may cause an eye irritation.

Skin contact: Wash the contact areas off immediately with plenty of water and soap. If appropriate procedures are not taken, this may cause sores on the skin.

Inhalation: Remove to fresh air immediately, and call a doctor.

5. Fire Fighting Measures

- Use specified extinguishers (gas, foam, powder) and extinguishing system under the Fire Defense Law.
- Since corrosive gas may be produced at the time of fire extinguishing, use an air inhalator when danger is predicted.
- Use a large amount of water as a supportive measure in order to get cooling effect if needed. (Indoor/outdoor fire hydrant)
- Carry away flammable materials immediately in case of fire.
- Move batteries to a safer place immediately in case of fire.

6. Accidental Release Measures

- Wipe off with dry cloth
- Keep away from fire
- Wear safety goggles, safety gloves as needed

7. Precautions for Safe Handling and Use

Storage: Store within the recommended limit of -20°C to 45°C (-4°F to 113°F), well -ventilated area. Do not expose to high temperature (60°C/140°F). Since short circuit can cause burn hazard or gas release, do not store with metal jewelry, metal covered tables, or metal belt. The lithium ion battery should be between 25% and 75% of full charge when stored for a long period of time. Store in a cool, dry, well ventilated area. And temperature above 100 Celsius degree can result in loss of battery performance, leakage, or rust. Do not expose the battery to open flames.

Handling: Do not disassemble, remodel, or solder. Do not short + and - terminals with a metal. Do not open the battery.

Charging: Charge within the limits of 0°C to 45°C (32°F to 113° F) temperature. Charge with specified charger designed for this battery.

Discharging: Discharge within the limits of -20°C to 60°C (-4 °F to 140°F) temperature. Disposal : Dispose in accordance with

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applicable federal, state and local regulations. Caution: Fire, Explosion, and Severe Burn Hazard. Do not Crush, Disassemble, Heat Above 100°C/212°F, or Incinerate.

8. Exposure Controls / Personal Protection (In case electrolyte is leaked from battery)

Acceptable concentration: Not specified in ACGIH. Facilities: Provide appropriate ventilation such as local ventilation system in the storage. Protective clothing: Gas mask for organic gases, safety goggle, safety glove.

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

10. Stability and Reactivity

External short-circuit, deformation by crush, high temperature (over 100°C) exposure of a battery cause generation of heat and ignition.

11. Toxicological Information

Acute toxicity: No information as a battery. Local effects: No information as a battery.

12. Ecological Information

When exhausted battery is buried in the ground, corrosion may be caused on the outer case of battery and electrolyte may be oozed. There is no information on environmental influence.

13. Disposal Consideration

When battery is disposed, isolate positive (+) and negative (-) terminals of the battery to avoid those terminals from touching each other. Batteries may be short-circuited when piled up or mixed with the other batteries in disorder. Dispose in accordance with applicable federal, state and local regulations

14. Transport Information

In the case of transportation, avoid exposure to high temperature and prevent the formation of any condensation. Take in a cargo of them without falling, dropping and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a cell. Please refer to Section 7-HANDLING AND STORAGE also.

UN regulation

UN number: 3480 (3481 when the battery is contained in equipment or packed with equipment) Proper shipping name: Lithium ion batteries ("lithium ion batteries contained in equipment" or "lithium ion batteries packed with equipment") Class: 9 *

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* Although this product meets the criteria of “dangerous goods” and are classified as “lithium ion batteries”, depending on the battery’s total capacity in the packaging, etc., they may not be subject to the fully regulated provisions.

Regulation depends on region and transportation mode

Worldwide - Air transportation:

ICAO/IATA-DGR [packing instruction 965 section IB or II] (When shipping batteries “packed with” or “contained in” equipment, use packing instruction 966 or 967 as appropriate.)

Worldwide - Ocean transportation:

IMO-IMDG Code [special provision 188]

Europe - Ground transportation: ADR [special provision 188]

**Instructions or provisions in the box brackets are conditions to make the battery cell exempted from full regulation.*

15. Regulatory Information

- IMDG Code: International Maritime Dangerous Goods (IMDG) Code 2022 Edition
- ICAO TI: International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air 2023-2024 Edition
- IATA DGR: International Air Transport Association (IATA) Dangerous Goods Regulations 65th Edition

16. Other Information

The application of the regulations can vary according to the aviation company, SWD, therefore, highly recommends that you consult with the aviation company prior to transporting battery or cell. This information has been compiled from sources considered to be reliable and to the best of our knowledge, accurate and reliable. However, SWD does not accept liability for any loss or damage that may occur, direct or indirect, from using this information.