



新普科技股份有限公司  
新世電子(常熟)有限公司  
新普科技(重慶)有限公司  
華普電子(常熟)有限公司  
Simplo Technology Co., Ltd.  
Simplo Technology(Changshu)Inc.  
Simplo Technology(Chongqing)Inc.  
Huapu Technology(Changshu)Inc.

Issued/Revised date: June 12 2023

Document No.: SDS\_Simplo-2307

## **Explanatory sheet about safety of product for transportation (Safety Data Sheet for transportation)**

### **1. Basic item**

Product name	Rechargeable Li-ion Battery Pack
UN number:	3480
Product code:	Refer to Table 1.
Model name	Refer to Table 1.
Manufacturer Name:	SIMPLO TECHNOLOGY CO., LTD
Address:	No. 471, Sec. 2, Bade Rd., Hu Kou Township, Hsinchu County, 30348, Taiwan
Phone number:	+886-3-5695920
Fax number:	+886-3-5695931

### **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**

SMP certifies the battery has passed and satisfied the UN Manual of Tests and Criteria Part III, sub-section 38.3 testing in SMP shipping. - SMP 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 "SDS\_Simplo-2307".
2. Packages of the battery satisfy the following conditions when SMP 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

Battery Part Numbers			Battery Information						
Lenovo ASM Lenovo PN Part Number	Lenovo FRU Part Number	Lenovo Model Name	MSDS Type #	UN DOT 38.3 Test Certificate	Cell Voltage (V)	Battery Voltage (V)	Watt hour Rating (Wh)	Weight (grams)	Equivalent Lithium Content (grams)
5B10Q62140		L17M2PF1	SDS_Simplo-2307	5B10Q62140_UN38.3	3.80	7.6	30	150	2.40
5B10Q71251		L17M3PB1	SDS_Simplo-2307	5B10Q71251_UN38.3	3.78	11.34	45	150	3.60
5B10Q93417		L17M3PG3	SDS_Simplo-2307	5B10Q93417_UN38.3	3.8	11.4	52.5	235	4.15
5B10S73499		L18M4PF0	SDS_Simplo-2307	5B10S73499_UN38.3	4.4	17.6	45.52	180	3.56
5B10T09079		L18M4PF3	SDS_Simplo-2307	5B10T09079_UN38.3	3.84	15.36	45	200	3.558
5B10T09096		L18M3PF6	SDS_Simplo-2307	5B10T09096_UN38.3	3.75	11.25	36	175	2.9385
5B10T09097		L18M3PF7	SDS_Simplo-2307	5B10T09097_UN38.3	3.8	11.4	52.5	220	4.149
5B10T09089		L18M3PF8	SDS_Simplo-2307	5B10T09089_UN38.3	3.8	11.4	52.5	220	4.149
5B10T09090		L18M4PF5	SDS_Simplo-2307	5B10T09090_UN38.3	3.8	15.2	70	290	5.532
5B10T03402		L18M3PF2	SDS_Simplo-2307	5B10T03402_UN38.3	3.75	11.25	36	155	2.9385
5B10T04975		L18M3PF1	SDS_Simplo-2307	5B10T04975_UN38.3	3.8	11.4	45	220	3.6
5B10T26393		L18M3PF2	SDS_Simplo-2307	5B10T26393_UN38.3	3.75	11.25	36	155	2.952
5B10T30215		L17M3PG3	SDS_Simplo-2307	5B10T30215_UN38.3	3.8	11.4	52.5	220	4.149
5B10U95573		L18M3PFB	SDS_Simplo-2307	5B10U95573_UN38.3	3.84	11.52	42	170	3.33
SB10V25234	5B10V25246	L19M3PF0	SDS_Simplo-2307	SB10V25234_UN38.3	3.75	11.25	36	170	2.952
SB10V25248	5B10V25238	L19M3PF1	SDS_Simplo-2307	SB10V25248_UN38.3	3.80	11.4	45	220	3.6
SB10V25233	5B10V25240	L19M3PF2	SDS_Simplo-2307	SB10V25233_UN38.3	3.84	11.52	57	220	4.455
SB10V27764	5B10V27761	L19M3PD3	SDS_Simplo-2307	SB10V27764_UN38.3	3.84	11.52	56.6	220	5.898
SB10W86199	5B10W86188	L19M4PC2	SDS_Simplo-2307	SB10W86199_UN38.3	3.84	15.36	80	220	6.42
SB10W86198	5B10W86192	L19M4PC1	SDS_Simplo-2307	SB10W86198_UN38.3	3.84	15.36	80	220	6.42
SB10W89840	5B10W89843	L19M3PF7	SDS_Simplo-2307	SB10W89840_UN38.3	3.80	11.40	45	222	3.564
SB10X55573	5B10X55569	L19M3PF9	SDS_Simplo-2307	SB10X55573_UN38.3	3.78	11.34	45	222	3.6
5B10Q71253	-	L17M2PB7	SDS_Simplo-2307	5B10Q71253_UN38.3	3.78	7.56	30	136.4	2.4
5B10T26390	-	L18M3PF9	SDS_Simplo-2307	5B10T26390_UN38.3	3.80	11.4	52.5	220	4.149
SB10W67172	5B10W67209	L18M4PF5	SDS_Simplo-2307	SB10W67172_UN38.3	3.80	15.2	70	290	5.532
SB10W67186	5B10W67369	L17M3PB0	SDS_Simplo-2307	SB10W67186_UN38.3	3.80	15.2	70	290	5.532
SB10W67200	5B10W67217	L18M4PF3	SDS_Simplo-2307	SB10W67200_UN38.3	3.8	11.4	52.5	220	4.15
SB10W67210	5B10W67282	L18M3PFB	SDS_Simplo-2307	SB10W67210_UN38.3	3.84	11.52	42	170	3.33
SB10W67259	5B10W67315	L18M4PF0	SDS_Simplo-2307	SB10W67259_UN38.3	4.4	17.6	45.52	180	3.56
SB10W67265	5B10W67313	L17M3PB1	SDS_Simplo-2307	SB10W67265_UN38.3	3.78	11.34	45	150	3.60
SB10W67268	5B10W67367	L18M3PF2	SDS_Simplo-2307	SB10W67268_UN38.3	3.75	11.25	36	155	2.94



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SB10W67280	5B10W67354	L18M3PF8	SDS_Simplo-2307	SB10W67280_UN38.3	3.8	11.4	52.5	220	4.15
SB10W67304	5B10W67327	L19M3PF2	SDS_Simplo-2307	SB10W67304_UN38.3	3.8	11.52	57	220	4.46
SB10W67311	5B10W67194	L18M4PF3	SDS_Simplo-2307	SB10W67311_UN38.3	3.8	15.36	45	200	3.56
SB10W67373	5B10W67420	L17M3PG3	SDS_Simplo-2307	SB10W67373_UN38.3	3.8	11.4	53	235	4.15
SB10W67377	5B10W67261	L19M3PF0	SDS_Simplo-2307	SB10W67377_UN38.3	3.8	11.25	36	170	2.95
SB10W67391	5B10W67341	L17M2PB7	SDS_Simplo-2307	SB10W67391_UN38.3	3.8	7.56	30	136	2.40
SB10W67398	5B10W67250	L18M3PF9	SDS_Simplo-2307	SB10W67398_UN38.3	3.80	11.4	52.5	220	4.149
SB10W67401	5B10W67393	L19M3PD3	SDS_Simplo-2307	SB10W67401_UN38.3	3.84	11.52	56.6	220	5.898
SB10W67406	5B10W67344	L17M2PF1	SDS_Simplo-2307	SB10W67406_UN38.3	3.8	7.6	30	150	2.40
SB10W67407	5B10W67350	L18M3PF1	SDS_Simplo-2307	SB10W67407_UN38.3	3.8	11.4	45	220	3.60
SB10W67411	5B10W67364	L19M3PF1	SDS_Simplo-2307	SB10W67411_UN38.3	3.8	11.4	45	220	3.60
SB10W69463	5B10W69464	L17M3PG3	SDS_Simplo-2307	SB10W69463_UN38.3	3.8	11.4	52.5	220	4.15
SB11B53884	5B11B53885	L20M4PC2	SDS_Simplo-2307	SB11B53884_UN38.3	3.84	15.36	83	329	6.252
SB11B48828	5B11B48825	L20M4PC1	SDS_Simplo-2307	SB11B48828_UN38.3	3.84	15.36	83	328	6.252
SB11B96717	5B11B96718	L20M3PC2	SDS_Simplo-2307	SB11B96717_UN38.3	3.84	11.52	45	189	3.519
SB11C66149	5B11C66148	L20M4PF2	SDS_Simplo-2307	SB11C66149_UN38.3	3.86	7.72	61	235	4.74
SB11C22841	5B11C22842	L20M4PDB	SDS_Simplo-2307	SB11C22841_UN38.3	3.84	15.36	60	230	4.722
SB11F29410	5B11F29414	L21M4PE2	SDS_Simplo-2307	SB11F29410_UN38.3	3.88	15.52	59	232	4.644
SB11F36368	5B11F36373	L21M4PC4	SDS_Simplo-2307	SB11F36368_UN38.3	3.84	15.36	71	308	5.61
SB11K38952	5B11K38959	L22M4PC0	SDS_Simplo-2307	SB11K38952_UN38.3	3.86	15.44	80	341	6.414
SB11K38741	5B11K38740	L22M4PC2	SDS_Simplo-2307	SB11K38741_UN38.3	3.86	15.44	80	336	6.414
SB11L93200	5B11L93199	L22M4PE1	SDS_Simplo-2307	SB11L93200_UN38.3	3.84	15.36	71	275	5.45
SB11M64607	5B11M64613	L23M4PK5	SDS_Simplo-2307		3.86	15.44	80		6.41



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SB10K97646	02DL008	L18M3P73	SDS_Simplo-2307	SB10K97646_UN38.3	3.84	11.52	51	200	3.942
SB10K97656	02DL018	L18M6PD2	SDS_Simplo-2307	SB10K97656_UN38.3	3.80	11.4	48	225	3.798
SB10V03234	02HM886	L19M3P71	SDS_Simplo-2307	SB10V03234_UN38.3	3.84	11.52	50	200	3.942
SB10T83119	02DL030	L18M4P90	SDS_Simplo-2307	SB10T83119_UN38.3	3.84	15.36	46	180	3.60
SB10T83124	5B10W13881	L19M4PG1	SDS_Simplo-2307	SB10T83124_UN38.3	3.84	15.36	46	190	3.60
SB10T83149	5B10W13906	L18M3P73	SDS_Simplo-2307	SB10T83149_UN38.3	3.84	11.52	51	200	3.942
SB10T83167	5B10W13924	L18M6PD2	SDS_Simplo-2307	SB10T83167_UN38.3	3.8	11.4	48	225	3.80
SB10T83172	5B10W13929	L19M3P71	SDS_Simplo-2307	SB10T83172_UN38.3	3.84	11.52	50	200	3.94
SB10T83176	5B10W13933	L18M4P90	SDS_Simplo-2307	SB10T83176_UN38.3	3.84	15.36	46	180	3.60
SB10W51915	5B10W51814	L20M4P72	SDS_Simplo-2307	SB10W51915_UN38.3	3.84	15.36	57	230	4.3236
SB10W51926	5B10W51827	L18M3P73	SDS_Simplo-2307	SB10W51926_UN38.3	3.84	11.52	51	200	3.942
SB10W51941	5B10W51842	L18M6PD2	SDS_Simplo-2307	SB10W51941_UN38.3	3.8	11.4	48	225	3.798
SB10W51949	5B10W51848	L21M4PG1	SDS_Simplo-2307	SB10W51949_UN38.3	3.84	15.36	46	182	3.6
SB10W51972	5B10W51871	L21M4P74	SDS_Simplo-2307	SB10W51972_UN38.3	3.86	15.44	86	320	6.684
SB11H56235	5B11H56334	L21M4PG1	SDS_Simplo-2307	SB11H56235_UN38.3	3.84	15.36	46	182	3.60
SB11H56302	5B11H56401	L23M3P73	SDS_Simplo-2307		3.87	11.61	75		5.6979



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# MATERIAL SAFETY DATA SHEET

Issued/Revised date: June 12 2023

Document No.: SDS\_Simplo-2307

## 1. Product and Company Identification

Product Identification:

Product name: Rechargeable Lithium ion battery cell

Product code: All Polymer models BYD manufactured

Cell manufacturers: BYD Company 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:

CAS Number: Not specified (3-1 and 3-2)

3-1. Cases: Plastic Material Not dangerous

3-2. Printed Circuit Board Assembly: Not dangerous

3-3. Lithium Ion Cell:

Hazardous Ingredients	%	CAS Number
Lithium Cobalt Oxide	35-45	12190-79-3
PVDF	0.4-2.0	24937-79-9
CNT	0.1-3	7440-44-0
Carbon	15-25	7440-44-0
PTFE	0.4-2.0	9002-84-0
Electrolyte (EC/DEC/EMC/LiPF <sub>6</sub> )	10-20	96-49-1 105-58-8 2485-62-3 21324-40-3
Additive(VC)	0.6-0.9	872-36-6
PE	1-5	-
PP	0.3-2.0	-
Copper	5-15	7440-50-8



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#### **4. First Aid Measures**

Batteries do not present a health hazard under normal use and handling. First-aid measures in the event of exposure to internal cell contents are:

- Inhalation: Remove to fresh air immediately. If breathing is difficult, seek emergency medical attention.
- Skin contact: May cause skin irritation, Remove contaminated clothes and shoes immediately. Wash extraneous matter or contact region with soap and plenty of water immediately.
- Eye contact: May cause eye irritation, do not rub one's eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.
- Ingestion: Ingestion of battery chemicals can be harmful, Make the victim vomit. When it is impossible or the feeling is not well after vomiting, seek medical attention.

#### **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 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.





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## **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 \* \* 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] (When shipping batteries “packed with” or “contained in” equipment, use packing instruction 966 or 967 section II as appropriate.)



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Worldwide - Ocean transportation:

IMO-IMDG Code [special provision 188 and 230]

Europe - Ground transportation: ADR [special provision 188 and 230]

\* 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 2020 Edition (Amendment 40-20)

ICAO TI: International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air 2023-2024Edition

IATA DGR: International Air Transport Association (IATA) Dangerous Goods Regulations (64th Edition)

## **16.Other Information**

The information contained herein is furnished without warranty of any kind, Users should consider this data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.