

Issued/Revised date :January 01 2021 Document No. : SDS_Simplo-2102

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

1. Basic item

Product name: Lithium-Ion Rechargeable 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 (R.O.C)

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-2102".
- 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.



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)
SB10K97605	01AV462	L16M3P73	SDS_Simplo-2102	SB10K97605_UN38.3	3.8	11.4	26.1	135	2.06
SB10K97615	01AV468	L17M2P52	SDS_Simplo-2102	SB10K97615_UN38.3	3.84	7.68	39	163	3.048
SB10K97622	01AV480	L17M3P72	SDS_Simplo-2102	SB10K97622_UN38.3	3.84	11.52	57	240	4.46
SB10K97612	01AV465	L17M3P54	SDS_Simplo-2102	SB10K97612_UN38.3	3.7	11.1	45	223	3.7
SB10K97608	01AV447	L17M3P52	SDS_Simplo-2102	SB10K97608_UN38.3	3.7	11.1	45	223	3.65
SB10K97588	01AV431		SDS_Simplo-2102	SB10K97588_UN38.3	3.84	11.52	57	245	4.46
SB10K97638	01AV499	L17M4P73	SDS_Simplo-2102	SB10K97638_UN38.3	3.84	15.36	54	228.3	4.22
SB10K97633	01AV488	L17M2P54	SDS_Simplo-2102	SB10K97633_UN38.3	3.84	7.68	39	145	3.048
SB10S57317	01YU911	L18M4P71	SDS_Simplo-2102	SB10S57317_UN38.3	3.84	15.36	80	314	6.282
SB10K97653	02DL015	L18M3PD2	SDS_Simplo-2102	SB10K97653_UN38.3	3.84	11.52	57	220	4.455
SB10K97647	02DL009	L18M3P74	SDS_Simplo-2102	SB10K97647_UN38.3	3.84	11.52	50.5	200	3.9465
SB10K97660	02DL022	L18M3P72	SDS_Simplo-2102	SB10K97660_UN38.3	3.84	11.52	50.53	200	3.946
SB10T83132	5B10W13889	L17M3P52	SDS_Simplo-2102	SB10T83132_UN38.3	3.7	11.1	45	223	3.65
SB10T83139	5B10W13896	L17M3P54	SDS_Simplo-2102	SB10T83139_UN38.3	3.7	11.1	45	223	3.70
SB10T83143	5B10W13900	L18M4P71	SDS_Simplo-2102	SB10T83143_UN38.3	3.84	15.36	80	314	6.28
SB10T83150	5B10W13907	L18M3P74	SDS_Simplo-2102	SB10T83150_UN38.3	3.84	11.52	50.5	200	3.95
SB10T83154	5B10W13911	L18M3PD2	SDS_Simplo-2102	SB10T83154_UN38.3	3.84	11.52	57	220	4.455
SB10T83159	5B10W13916	L17M2P52	SDS_Simplo-2102	SB10T83159_UN38.3	3.84	7.68	39	163	3.05
SB10T83171	5B10W13928	L18M3P72	SDS_Simplo-2102	SB10T83171_UN38.3	3.84	11.52	50.53	200	3.946
SB10W86019	5B10W86021	L19M3PG0	SDS_Simplo-2102	SB10W86019_UN38.3	3.84	3.84	31.5	127	2.4885
SB10T83126	5B10W13883	L19M4P70	SDS_Simplo-2102	SB10T83126_UN38.3	3.86	7.72	50	183	7.776
SB10T83206	5B10W13963	L19M3P73	SDS_Simplo-2102	SB10T83206_UN38.3	3.86	11.58	48	185	3.753
SB10X02591	5B10X02606	L19M3PD5	SDS_Simplo-2102	SB10X02591_UN38.3	3.7	11.1	45	222	3.71
SB10X19047	5B10X19049	L19M4P71	SDS_Simplo-2102	SB10X19047_UN38.3	3.8	15.36	80	320	6.22
SB10T83208	5B10W13965	L19M4P73	SDS_Simplo-2102	SB10T83208_UN38.3	3.86	7.72	44.5	182	6.924
SB10W51945	5B10W51846	L18M3P72	SDS_Simplo-2102	SB10W51945_UN38.3	3.84	11.52	50.53	200	3.946



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Battery Part Numbers		Battery Information							
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121500105		N/A	SDS_Simplo-2102	121500105_UN38.3	3.7	3.7	25	130	2.04
5B10G78609		L14M3P21	SDS_Simplo-2102	5B10G78609_UN38.3	3.7	11.1	45	216	3.65
5B10G78610		L14M2P21	SDS_Simplo-2102	5B10G78610_UN38.3	3.7	7.4	30	155	2.43
5B10H09628		L14M3P22	SDS_Simplo-2102	5B10H09628_UN38.3	3.7	11.1	45	215	3.65
5B10H09633		L14M4P21	SDS_Simplo-2102	5B10H09633_UN38.3	3.7	7.4	60	284	4.86
5B10H13096		L14M2P24	SDS_Simplo-2102	5B10H13096_UN38.3	3.8	7.6	31	148	2.43
5B10H13098		L14M2P23	SDS_Simplo-2102	5B10H13098_UN38.3	3.7	7.4	30	145	2.43
5B10H22085		L14M4P23	SDS_Simplo-2102	5B10H22085_UN38.3	3.7	14.8	60	292	4.86
5B10H33230		L14M3P23	SDS_Simplo-2102	5B10H33230_UN38.3	3.7	11.1	36	175	2.97
5B10H35530		L14M6P21	SDS_Simplo-2102	5B10H35530_UN38.3	3.7	11.1	90	520	7.29
5B10H41180		L14M3P24	SDS_Simplo-2102	5B10H41180_UN38.3	3.7	11.1	45	225	3.65
5B10H54716		L14M4PB0	SDS_Simplo-2102	5B10H54716_UN38.3	3.7	14.8	60	275	4.86
5B10J46560		L15M2PB0	SDS_Simplo-2102	5B10J46560_UN38.3	3.8	7.6	35	145	2.77
5B10J50660		L15M4P20	SDS_Simplo-2102	5B10J50660_UN38.3	3.85	7.7	53	215	4.06
5B10K10155		L14M3P23	SDS_Simplo-2102	5B10K10155_UN38.3	3.7	11.1	36	175	2.97
5B10K10218		L14M2P23	SDS_Simplo-2102	5B10K10218_UN38.3	3.7	7.4	30	145	2.43
5B10K10222		L14M2P24	SDS_Simplo-2102	5B10K10222_UN38.3	3.8	7.6	35	140	2.77
5B10K10228		L14M2P22	SDS_Simplo-2102	5B10K10228_UN38.3	3.7	7.4	30	140	2.43
5B10K10229		L14M2P21	SDS_Simplo-2102	5B10K10229_UN38.3	3.7	7.4	30	147	2.43
5B10K10236		L14M3P21	SDS_Simplo-2102	5B10K10236_UN38.3	3.7	11.1	45	200	3.65
5B10K84492		L15M3PB0	SDS_Simplo-2102	5B10K84492_UN38.3	3.8	11.4	53	210	4.06
5B10K84493		L15M2PB1	SDS_Simplo-2102	5B10K84493_UN38.3	3.8	7.6	35	150	2.71
5B10K88048		L15M3PB1	SDS_Simplo-2102	5B10K88048_UN38.3	3.7	11.1	45	200	3.65
5B10L13948		L15M2PB6	SDS_Simplo-2102	5B10L13948_UN38.3	3.75	7.5	30	140	2.42
5B10M49822		L14M2P21	SDS_Simplo-2102	5B10M49822_UN38.3	3.7	7.4	30	155	2.43
5B10M52813		L14M3P21	SDS_Simplo-2102	5B10M52813_UN38.3	3.7	11.1	45	216	3.65
5B10M52815		L14M2P21	SDS_Simplo-2102	5B10M52815_UN38.3	3.7	7.4	30	154	2.43
5B10M53743		L16M6PC1	SDS_Simplo-2102	5B10M53743_UN38.3	3.84	11.52	72	280	5.64
5B10N00789		L14M6P21	SDS_Simplo-2102	5B10N00789_UN38.3	3.7	11.1	90	515	7.29
5B10P35082		L17M4PB1	SDS_Simplo-2102	5B10P35082_UN38.3	3.84	15.36	80	320	6.22
5B10Q39203		L14M2P21	SDS_Simplo-2102	5B10Q39203_UN38.3	3.7	7.4	30	160	2.43
SB18C15129		L15M3PB1	SDS_Simplo-2102	SB18C15129_UN38.3	3.7	11.1	45	210	3.65



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5B10T83738		L18M4PF1	SDS_Simplo-2102	5B10T83738_UN38.3	3.84	15.36	69	270	5.4
5B10U65276		L18M4PF1	SDS_Simplo-2102	5B10U65276_UN38.3	3.84	15.36	69	270	5.4
5B10U40209		L18M4PE0	SDS_Simplo-2102	5B10U40209_UN38.3	3.86	7.72	51	190	3.966
SB10W42961	5B10W42963	L19M2PF1	SDS_Simplo-2102	SB10W42961_UN38.3	3.75	7.5	32	145	2.562
SB10W65293	5B10W65278	L19M4PF5	SDS_Simplo-2102	SB10W65293_UN38.3	3.86	15.44	71	270	5.42
SB10W67161	5B10W67294	L14M2P21	SDS_Simplo-2102	SB10W67161_UN38.3	3.7	7.4	29.97	160	2.43
SB10W67267	5B10W67244	L18M4PF1	SDS_Simplo-2102	SB10W67267_UN38.3	3.84	15.36	69	270	5.40
SB10W67366	5B10W67340	L15M3PB1	SDS_Simplo-2102	SB10W67366_UN38.3	3.7	11.1	44.955	200	3.65
SB10W67368	5B10W67296	L18M4PE0	SDS_Simplo-2102	SB10W67368_UN38.3	3.86	7.72	51	190	3.97
SB10W69453	5B10W69460	L17M3PG2	SDS_Simplo-2102	SB10W69453_UN38.3	3.84	15.36	69	270	5.40
SB10W69459	5B10W69461	L18M4PF1	SDS_Simplo-2102	SB10W69459_UN38.3	3.84	15.36	69	270	5.40
SB10Z26486	5B10Z26479	L19M4PDC	SDS_Simplo-2102	SB10Z26486_UN38.3	3.84	15.36	71	265	5.556
SB10Z33892	5B10Z33899	L19M4PF7	SDS_Simplo-2102	SB10Z33892_UN38.3	3.86	7.72	50.25	187.5	3.906
SB10Z49580	5B10Z49581	L19M4PC3	SDS_Simplo-2102	SB10Z49580_UN38.3	3.84	15.36	70	266.7	5.484
SB10Z21199	5B10Z21210	L19M3PDA	SDS_Simplo-2102	SB10Z21199_UN38.3	3.84	11.52	45	173	3.5415
SB10Z21200	5B10Z21201	L19M4PDB	SDS_Simplo-2102	SB10Z21200_UN38.3	3.84	15.36	60	231	4.722



MATERIAL SAFETY DATA SHEET

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1. Product and Company Identification

Product Identification:

Product name: Lithium ion rechargeable battery cell Product code: All Polymer models Coslight manufactured

Cell manufacturers: ZHU HAI COSLIGHT BATTERY Co., Ltd.

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 dangerous3-2. Printed Circuit Board Assembly: Not dangerous

3-3. Lithium Ion Cell:

Hazardous Ingredients	%	CAS Number	
Graphite	7-25	7782-42-5	
Lithium Cobalt Oxide	15~40	12190-79-3	
Hexafluoropropylene-vinylidene fluoride Copolymer	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	
Ethyl Methyl Carbonate	0-15	623-53-0	
Propylete Carbonate	0-15	108-32-7	
Ethylene Carbonate	0-15	96-49-1	



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.

9. Physical and Chemical Properties

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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 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 and 230]



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

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 2021-2022 Edition

IATA DGR: International Air Transport Association (IATA) Dangerous Goods Regulations (62nd Edition, 2021)

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.

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