



新普科技股份有限公司
中普科技股份有限公司
太普電子(常熟)有限公司
Simplo Technology Co.,Ltd.
Trend Power Technology Co., Ltd.
Trend Power Technology(changshu) Inc

MATERIAL SAFETY DATA SHEET

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1. Product and Company Identification

Product Identification :

Lithium-Ion Rechargeable Battery Pack/10S4P

Customer Model : SBC-DT

Simplo P/N: B9JM2059F

Power : 504Wh

Classification : SMP declare that battery Watt-hour rating is more than 100 WH, thus, it is considered as a “dangerous” product and should be transported per dangerous goods class 9 regulation which packagings must meet Packing Group II performance standards.

Manufacturer :

Simplo Technology Co., Ltd.

NO.471, Sec.2, Pa Teh Rd., Hu Kou 303, Hsin Chu Hsien, Taiwan

Tel : 886-3-5695920 Fax : 886-3-5695931

Trend Power Technology Co., Ltd.

NO.471, Sec.2, Pa Teh Rd., Hu Kou 303, Hsin Chu Hsien, Taiwan

Tel : 886-3-5695916 Fax : 886-3-5696115

Trend Power Technology(changshu) Inc..

No.2 DongNan Avenue,ChangShu,JiangSu Province

Tel : 86-0512-52122255 Fax : 86-0512-52302277

2. Hazards Identification

Primary routes of entry : Skin contact, Skin absorption; Eye contact, Inhalation and ingestion: No

Symptoms of exposure : Skin contact, No effect under routine handling and use.

Skin absorption : No effect under routine handling and use.

Eye contact : No effect under routine handling and use.

Inhalation : No effect under routine handling and use.

Reported as carcinogen : Not applicable

Hazard : It may cause heat generation or electrolyte leakage if battery terminals contact with other metal. Electrolyte is flammable. In case of electrolyte leakage, move the battery from fire immediately.

3. Composition / Identification on Ingredients

Substance : Lithium Ion Battery

CAS number : Reference 3-3

Composition :



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- 3-1. Cases: Plastic Not dangerous
- 3-2. Printed Circuit Board Assembly Not dangerous
- 3-3. Lithium Ion Cell :

Hazardous Ingredients	%	CAS Number
Lithium transition metal oxidate	20-60 %	12190-79-3 12057-17-9
Aluminum	1-10 %	7429-90-5
Graphite	10-30%	7782-42-5 7740-44-0
Copper	1-15%	7440-50-8
Organic electrolyte principally involves ester carbonate	5-25%	N/A
Aluminum, iron, aluminum laminated plastic	1-30%	N/A

- 3.4. Watt/Hour rating per cell Not more than 20 WH
- 3.5 Watt/Hour rating per battery More than 100 WH
- 3.6 RoHS Directive Fully compliant with RoHS

4. First Aid Measures

- Inhalation : Make the victim blow his/her nose, gargle. Seek medical attention if necessary.
- Skin contact : Remove contaminated clothes and shoes immediately. Wash extraneous matter or contact region with soap and plenty of water immediately.
- Eye contact : Do not rub one's eyes. Immediately flush eyes with water continuously for at least 15 minutes. Seek medical attention immediately.
- Ingestion : Make the victim vomit. When it is impossible or the feeling is not well after vomiting, seek medical attention.

5. Fire Fighting Measures

- Extinguishing Media : Use suitable extinguishing media. Dry chemical, carbon dioxide and plenty of water are effective.
- Firefighting Equipment : Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

6. Accidental Release Measures

- On Land : Place material into suitable containers and call local fire/police department.
- In Water : If possible, Remove from water and call local fire/police department.



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7. Handling and Storage

Handling :

Do not expose the battery to excessive physical shock or vibration. Short-circuiting should be avoided. However, accidental short-circuiting for a few seconds will not seriously affect the battery. Prolonged short circuits will cause the battery to rapidly lose energy, could generate enough heat to burn skin. Sources of short circuits include jumbled batteries in bulk containers, coins, metal jewelry, metal covered tables, or metal belts used for assembly of batteries in devices. To minimize risk of short-circuiting, the protective case supplied with the battery should be used to cover the terminals when transporting or storing the battery. Do not disassemble or deform the battery. Should an individual cell within a battery become ruptured, do not allow contact with water.

Storage :

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 degree can result in loss of battery performance, leakage, or rust. Do not expose the battery to open flames.

8. Exposure Controls / Personal Protection

Engineering Controls : Keep away from heat and open flame. Store in a cool dry place

Personal Protection :

Respirator : Not required during normal operations. SCBA required in the event of a fire.

Eye/Face Protection : Not required beyond safety practices of employer.

Gloves : Not required for handling of battery.

Foot Protection : Steel toed shoes recommended for large container handling.

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

Reactivity : None

Incompatibilities : None during normal operation. Avoid exposure to heat, open flame, and corrosives.



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Conditions to Avoid : Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

11. Toxicological Information

This product does not elicit toxicological properties during routine handling and use.

12. Ecological Information

Lithium ion battery pack can be disposable in accordance with appropriate federal, state and local regulations.

13. Disposal Consideration

Recommended methods for safe and environmentally preferred disposal:
 Product(waste from residues)
 Do not throw out a used battery cell. Recycle it through the recycling company.
 Contaminated packaging
 Neither a container nor packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates, dispose as industrial wastes subject to special control.

14. Transport Information

Regulations specifically applicable to the product: International Air Transport Association (IATA) Dangerous Goods Regulations (57th Edition,2016).
 Section IA of Packing Instruction 965 for Lithium Ion battery
 Special Provisions A51, A88, A99, A154 , A164 and A183
 Section I of Packing Instruction 966 for Lithium Ion battery packed with equipment
 Special Provisions A88, A99, A154 , A164 , A181 and A185
 Section I of Packing Instruction 967 for Lithium Ion battery contained in equipment
 Special Provisions A48, A99, A154 ,A164 , A181 and A185,
 UN 3480 (Lithium ion batteries) and UN3481 (Lithium ion batteries contained in equipment or Lithium ion batteries packed with equipment) and UN3171 (Battery Powered Vehicle)
 US Department of Transportation (DOT) 49 code of Federal Regulations [USA]
 International Civil Aviation Organization (ICAO) Technical Instructions (2015-2016 Edition)
 Transport Regulations for Sea Transport IMDG Code (2014 Edition) SP962 when shipping as UN3171.

Test results of the UN Recommendation on the Transport of Dangerous Goods

Manual of Test and Criteria (38.3 Lithium battery)		Test Results	Remark
No	Test item		
T1	Altitude Simulation	Pass	
T2	Thermal Test	Pass	
T3	Vibration	Pass	
T4	Shock	Pass	
T5	External Short Circuit	Pass	
T6	Impact/Crush	Pass	



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T7	Overcharge	Pass	
T8	Forced Discharge	Pass	

15. Regulatory Information

The international regulations on air transportation of rechargeable Lithium Ion batteries (commercial and cargo) are governed mainly by the following regulations:

1. UN Recommendations on the Transportation of Dangerous Goods Model Regulations
2. U.S. Department of Transportation hazardous materials regulations (HMR)
3. International Civil Aviation Organization (ICAO) Technical Instructions
4. International Air Transport Association (IATA) Dangerous Goods Regulations UN3480 Packing Instruction 965 Part 2
5. European Communities (EC) Hazard Classification according to directives 67/548/E
R-Phases (R10/R11/R15/R17/R20/R22/R36/R37/R38/R43/R48/R49/R50/R51/R53/R62/R65/R67)
S-phases (S5/S7/8/S9/S16/S22/S24/S25/S26/S29/S33/S36/37/S43/S45/S53/S60/S61/S62)

16. DISCLAIMER

The application of the regulations can vary according to the aviation company, SMP, 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, SMP does not accept liability for any loss or damage that may occur, direct or indirect, from using this information.