Safety Data Sheet

1. Product and Company Identification

Important Note: As a solid, manufactured article, exposure to hazardous ingredients is not expected with normal use. This battery is an article pursuant to 29 CFR 1910.1200 and, as such, is not subject to the OSHA Hazard Communication Standard requirement. The information contained in this Safety Data Sheet contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Commercial product name
182-1001

Use of the substance/preparation
Lithium-ion Battery

Manufacturer
Celltech (Zhongshan) Ltd.

Address
4th Floor, Building 3 / No. 6 Jiusha Road / Torch Development District / Zhongshan / China

Company/undertaking identification
Emergency Contact (CHEMTREC)
+86-760-87365930
Further Information

Battery-System: Lithium-ion Battery

Nominal Voltage: 3.6V
Nominal capacity: 12Ah
Energy: 43.2Wh

Remark:

The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. Celltech (Zhongshan) Ltd. makes no warranty, expressed or implied, with respect to this information and disclaims all liabilities from reliance on it.

2. Hazards Identification

The important hazards and adverse effects of the chemical product	No information available
Chemical product - specific	No information available
Outline of an anticipated emergency	Chemical contents are seal in metal can. Therefore, risk of exposure never occurs unless battery is mechanically or electrically abused. Risk of explosion by fire is anticipated if batteries are disposed of in fire or heated. Above 100 degree Celsius. Stacking or jumbling of batteries may cause external short circuits, heat generation, in some case, allowing fire or explosion.

3. Composition/information on ingredients

Portion	Material name	Concentration range (wt %)
Positive electrode	Lithium transition metal oxidate ($Li[M]_m[O]_n$ *2)	20~60
Positive electrode's base	Aluminum	1~10
Negative electrode	Carbon	10~30
Negative electrode's base	Copper	1~15
Electrolyte	Organic electrolyte principally involves ester carbonate	5~25
Outer case	Aluminum, iron, aluminum laminated plastic	1~30

4. First Aid Measures

Inhalation	If ingredient leaked out from inside of a battery and if inhaled it, move to a place where, fresh air is provided. Refer for medical attention.
Skin Contact	If ingredient leaked out from inside of a battery and stuck on skin, wash the contact Skin contact areas off immediately with plenty of water and soap. If appropriate procedures are not taken, this may cause sores on the skin. Refer for medical attention.
Eyes Contact	If ingredient leaked out from inside of a battery and came into eyes, flush the eyes with plenty of water for at least 15 minutes immediately without rubbing. Take a medical treatment. If appropriate procedures are not taken, this may cause an eye irritation.
Swallowing	In case of swallowing of battery, immediately refer for medical attention.

5. Fire Fighting Measures

Fire extinguishing agent:
Dry chemical, alcohol-resistant foam, powder, atomized water, carbon dioxide and dry sand are effective.

Extinguishing method:
Escape batteries to safe place prevent from ignition by spreading fire.
Because of packing material of battery is paper, use water extinguisher, CO2 extinguisher or powder extinguisher as normal extinguisher.
Since vapor, generated from burning batteries may make eyes, nose and throat irritate, be sure to extinguish the fire on the windward side. Wear the respiratory protection equipment in some cases.

6. Accidental Release Measures

Chemical contents are sealed in metal can. But if the battery is mechanically or electrically abused, contents may leak out. In such case, take action as shown below.
Personal precautions: Temporary inhalation of odor and attaching of electrolyte to skin does not cause serious health hazard. Be sure the ventilation and washing out of electrolyte quickly.
Environmental precautions: Clean it up quickly.
Method and materials for containment and methods and materials for cleaning up:
Contain and collect spillage and place in container for disposal according to local regulations.

7. Handling and Storage

Handling

Do not short-circuit, disassemble, deform, heat above 77℃ or incinerate.
Do not pile up or mingle battery with each other.
Do not place battery on metal case, metal plate or antistatic material.
In case of multi cell application, replace all batteries to new at once when replacing used batteries

Storage

Be sure to store batteries in well-ventilated, dry and cool conditions.
Keep away from water, rain, snow, frost or dew condensation.
Do not store batteries near source of heat or nozzle of hot air.
Do not store batteries in direct sunshine.
Take care not to get wet packing by dew condensation when packing is removed from cold to warm and humid condition.
Enough number of fire extinguishing apparatuses should be installed in warehouse

8. Exposure controls/personal protection Exposure limit values Exposure limits

There is no need of personal protective equipment on regular handling and storage. In the event,

however, a large amount of electrolyte should be released by mechanical or electrical abuse, use the protection as shown below.

Respiratory protection: Mask (with a filter preferably)

Hand protection: Synthetic rubber gloves

Eye protection: Goggles or glasses

9. Physical and Chemical Properties

Appearance

Form:	Solid
Color:	Various (per PVC/plastic color)
Odor:	Odorless

10. Stability and Reactivity

Stability: Stable on regular handling
Conditions to Avoid: External short circuit of battery, deformation by crush, exposure at high temperature of more than 77 ℃ (may cause heat generation and ignition), direct sunlight, high humidity.
Materials to avoid: Substances that cause short circuit.

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-fibrotic lung injury and membrane irritation.

12. Ecological Information

Further information
Ecological injuries are not known or expected under normal use. Do not flush into surface water or sanitary sewer system.

13. Disposal Considerations

Dispose of batteries in accordance with applicable federal, state and local regulations. Wrapping of battery in insulative bag or packing battery in original package is recommended in order to prevent ignition due to short-circuit.

14. Transport Information

The rechargeable Lithium-ion battery pack as stated in Appendix are made in compliance to the requirements stated in the latest edition of the IATA Dangerous Goods Regulations Packing Instruction 965 section IB such that they can be transported as dangerous goods. However, if those Lithium-ion battery packs are pack with or contained in equipment, then it is the responsibility of the shipper to ensure that the consignment are packed in compliance to the 66th edition of the IATA Dangerous Goods Regulations section II of Packing Instruction 966 or 967.

With regard to transport, the following regulations are cited and considered:
- The International Civil Aviation Organization (ICAO) Technical Instructions (2025-2026 Edition),
- The International Air Transport Association (IATA) Dangerous Goods Regulations (66th Edition, 2025)
- The International Maritime Dangerous Goods (IMDG) Code (2024 Edition, IMDG 42-24 Edition, Special Provision 188),
- US Hazardous Materials Regulations 49 CFR (Code of Federal Regulations) Sections 173.185 Lithium batteries and cells,
- The UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries
- UN No. 3480(3481 when the battery is contained in equipment or packed with equipment)

Our products are properly classified, described, packaged, marked, and labeled, and are in proper condition for transportation according to all the applicable international and national governmental regulations, not limited to the above mentioned. We further certify that the enclosed products have been tested and fulfilled the requirements and conditions in accordance with UN Recommendations (T1 - T8) on the Transport of Dangerous Goods Model Regulations and the Manual of Testes and Criteria that can be treated as "**Dangerous Goods in class 9"**.

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

No	Test Item	Test Results	Remark
T1	Attitude Simulation	PASS	
T2	Thermal Test	PASS	
T3	Vibration	PASS	
T4	Shock	PASS	
T5	External Short Circuit	PASS	
T6	Impact	PASS	
T7	Overcharge	PASS	
T8	Forced Discharge	PASS	

The Batteries are protected so as to prevent short circuits including protection against contact with conductive materials Within the same packaging that could lead to a short circuit. The Batteries have been packed according to PI965, Section **IB** of the current 66th edition of the IATA Dangerous Goods Regulations 2025, therefore they are carried as **"Dangerous Goods in class 9"**

15. Regulatory Information

Environment-related law of batteries: EU nations have applicable law in accordance with Directive 2013/56/EU and other some countries, China, Korea, Brazil, some provinces of USA and Canada or so have similar law.

16. Other Information

Data of sections 4 to 8, as well as 10 to 12, do not necessarily refer to the use and the regular handling of the product (in this sense consult package leaflet and expert information), but to release of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product and is based on the present level of our knowledge. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.