Safety Data Sheet

Risen Stack1 Series

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1 IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Identifier: Rechargeable Lithium-ion Battery Module

Other means of identification: Model number: MB31

Synonyms: LiFePO4, LFP, Lithium-ion battery

Classification (UN/ID No.): UN3480

MB31 is the internal Battery System for the BESS systems with the following model numbers:

SU48E24LM	SU72E36LM	SU60E30LM	SU84E42LM
SU96E48LM	SU108E54LM	SU120E60LM	

Recommended use of the chemical and restrictions on use:

Energy storage systems and Battery systems

Details of Manufacturer:SYL (NINGBO) BATTERY CO., LTD.

No.23 Xingke Zhong Road, Meilin Street, Ninghai, Ningbo City, 315609 Zhejiang, P.R. CHINA

WWW.SYLBATTERY.COM

Importer's Contact Information:

Company's full name: RISEN ENERGY (AUSTRALIA) PTY LTD

Trading Address: Unit 35115 Ricketts Rd, Mount Waverley VlC 3149

Customer Service Hotline: 03 90127788

Contact Person Number:04 10888515

Email: info@risenenergy.com.aue

Official website: http://www.risenenergy.com.aue

Service hours: Monday to Friday 9:00-18:00 (Excluding Holidays)

2 HAZARDS IDENTIFICATION:

This product is a battery. Intended use of the product should not result in exposure to the chemical substance. In case of rupture the hazards listed below exist.

Classification of hazardous chemical:

- Acute toxicity, oral: Category 4
- Skin corrosion/irritation: Category 2
- Serious eye damage/ eye irritation: Category 2A
- Specific target organ toxicity, single exposure: Respiratory tract irritation: Category 3

Signal word: WARNING

Hazard statements:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H355 May cause respiratory irritation.

Precautionary statements:

Prevention:

P264 Wash skin and clothing thoroughly after handling

P261 Avoid breathing dust, fume, gas, mist, vapours, spray.

Response:

P314 Get medical advice/attention if you feel unwell.

P301 + P312 IF SWALLOWED: Call a POISON centre if you feel unwell.

P302 + P353 IF ON SKIN: Wash with plenty of water

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents to approved waste treatment plants

Label elements, including precautionary statements:

The packaging includes labels for Transport of Dangerous Goods

Other hazards:

Physical and chemical hazards: See Section 10

Human health hazards: See Section 11

Environmental hazards: See Section 12

3 OMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Composition	Chemical Formula	CAS No	Weight (%)
Nickel cobalt manganese lithium oxide	LiFePO4	15365-14-7	38.10
Graphite	C	7782-42-5	20.80
Electrolyte (Lithium hexafluorophosphate)	LiPF6	21324-40-3	3.80
Copper	Cu	7440-50-8	7.90
Aluminium	AL	7429-90-5	4.90
Dissepiment (polyethylene)	PE	9002-88-4	3.20
Ethylene carbonate(EC)	C3H4O3	96-49-1	8.10
Ethyl methyl carbonate(EMC)	C4H8O3	623-53-0	13.20
Lead	Pb	7439-92-1	Note Detected
Cadmium	Cd	7440-43-9	Note Detected
Mercury	Hg	7439-97-6	Note Detected

4 FIRST AID MEASURES

Description of necessary first aid measures

After eye contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention if irritation persists.

After skin contact: Remove contaminated clothing and shoes. Immediately wash

with water and soap and rinse thoroughly for 15 minutes. Wash clothing and shoes before reuse. If irritation occurs get medical attention.

After inhalation: Remove victim to fresh air area. Administer artificial respiration if breathing is difficult. Seek medical attention.

After swallowing: Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention.

Symptoms caused by exposure
Symptoms Exposure to battery contents may cause irritation and potential burns

Medical attention and special treatment
Notes to physician Treat symptomatically

5 FIREFIGHTING MEASURES

Suitable extinguishing media
Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. ABC extinguishers are not effective when the battery pack is on fire.

Specific hazards arising from the chemical
Contents react with water.
Battery may burst and release hazardous decomposition products when exposed to a fire situation. The battery contains flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperatures (>150degC), when damaged or abused (e.g. mechanical damage or electrical overcharging).
May burn rapidly with flare-burning effect. May ignite other batteries in close proximity.

Specific protective equipment and precautions for firefighters
Wear positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing.

Hazchem code: **4W**

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Avoid breathing vapour. Avoid skin contact. Ensure adequate ventilation. Remove all sources of ignition. Use Personal Protective Equipment (PPE)

Environmental precautions

Prevent from entering into soil, diches, sewers, waterways and/or ground water.

Methods and materials for containment and cleaning up

If battery is damaged or ruptured, absorb any liquid with sand or similar dry medium. Contain spillage then collect and place in suitable containers for disposal according to local regulations.

7 HANDLING AND STORAGE

Precautions for safe handling

Before use carefully read the product manuals. The batteries are heavy, use correct lifting technique.
Avoid short circuiting the battery or installing with reversed polarity. Avoid mechanical damage of the battery. Do not open or disassemble.
In areas contaminated by damaged batteries use of safe work practices is recommended, including avoiding eye and skin contact and inhalation. Observe good personal hygiene, including removing contaminated clothing and washing hands before eating.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry well-ventilated area. Keep away from water, heat or ignition sources and foodstuffs. Ensure that batteries are protected from physical damage and include adequate labelling.
Do not stack more than 8 batteries on top of each other, to avoid mechanical damage.

8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure control measures

This product presents no health hazards to the user when used according to label directions for its intended purposes.

Control banding

Control banding is not applied.

Engineering controls

Use local exhaust ventilation to control sources of dust, mist, fumes, vapour and condensation.

Individual protection measures (PPE)

Eye and face protection: None required under normal conditions. If battery case and cells are damaged, wear tight-fitting safety googles or face shield.

Hand protection:
None required under normal conditions. Wear appropriate gloves if handling damaged battery.

Skin and body protection: None required under normal conditions. If battery is damaged, wear suitable protective clothing to minimise contact with skin.

Respiratory protection:
None required under normal conditions. If exposure to fumes from a damaged battery is possible then ventilate or evacuate to a well-ventilated area. SCBA is required for larger leakages.

Thermal hazards:
None required under normal conditions. If the battery case is damaged or hot wear protective gloves if handling. Do not handle if the battery is producing sparks or flame.

Electrical protection: None required under normal conditions. If the battery is damaged use avoid touching the battery with conductive material or items.

9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Colour	Grey or Cream
Physical state	Rectangular enclosure with handle
Odour	Not determined
Odour threshold	Not determined
pH:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not available
Flash point:	Not determined
Evaporation rate:	Not determined
Flammability (solid/gas):	Not available
Explosion limits (vol% in air):	Not determined
Vapour pressure; kPa at 20degC:	Not available

Vapour density:	Not available
Relative density (water=1)	Not determined
Solubility in water:	Not available
Partition coefficient; n-octanl/water:	Not available
Auto-ignition temperature:	Not available
Decomposition temperature:	Not available
Viscosity:	Not available
Voltage:	38.4Vdc
Electrical energy:	12057.6Wh

10 STABILITY AND REACTIVITY

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated

Chemical stability
Stable under normal use and recommended storage conditions

Possibility of hazardous reactions
This product is considered stable if used as prescribed, however avoid misuse (e.g. short-circuiting or connecting with reverse polarity)

Conditions to avoid
Heat above 70degC or mechanical damage or short circuiting of the battery.
Avoid all sources of ignition: heat, sparks, open flame.
Avoid all sources of water: rain, condensation, spillage.
Avoid exposure to humid conditions over a long period of time

Incompatible materials
Strong oxidisers or acids

Hazardous and decomposition products
No hazardous decomposition products if handled and stored as prescribed/indicated.
May evolve carbon monoxide, carbon dioxide, lithium oxide fumes when heated to decomposition.

11 TOXICOLOGY INFORMATION

Information on possible routes of exposure

Acute toxicity:

No specific toxicity data exists for this product.

The battery consists of a sealed metallic enclosure containing several chemicals and materials of construction that may be hazardous upon release.

Inhalation: Not a likely route of exposure under normal conditions. Toxicity data and effects of inhalation exposure not available.

Ingestion: Not a likely route of exposure under normal conditions. Toxicity data and effects of ingestion not available.

Skin contact: Not a likely route of exposure under normal conditions. Toxicity data and effects of skin contact exposure not available.

Eye contact: Not a likely route of exposure under normal conditions. Toxicity data and effects of eye contact exposure not available.

Early onset symptoms related to exposure

Refer to Section 4:

Exposure to battery contents may cause irritation and potential burns

Delayed health effects from exposure

No information available

Exposure levels and health effects

Not determined

Mixtures of chemicals

No information available

Other information

No information available

12 TOXICOLOGY INFORMATION

Ecotoxicity

This product is not classified as environmentally hazardous.

Persistence and degradability

Not determined

Bio accumulative potential

Not determined

Mobility in soil

Not determined

Other adverse effects

Not determined

13 DISPOSAL CONSIDERATIONS

Disposal methods

Recycling is recommended. Do not allow product to enter water bodies or sewage systems. Dispose of in accordance with current local regulations.

Contaminated packaging should be disposed of in accordance with current local regulations.

14 TRANSPORT INFORMATION

Term	Description
UN number	3480
Proper shipping name	Lithium-ion batteries
Transport hazard class	9
Packing group number	II
Environmental hazards - Marine pollutant	No

The battery State of Charge (SoC) is not to exceed 30% of the rated capacity.

The battery is to be transported in the approved packaging, or in an approved battery system, with the appropriate markings on the outside of the packaging.

The lithium-ion cell contained within the battery has passed the test UN38.3
The battery can be transported by sea or by air.

15 REGULATORY INFORMATION

Safety, health and environmental regulations

Other regulatory information on the hazardous chemical that is not provided elsewhere in this SDS.

Refer to:

- Australian Code for the transport of Dangerous Goods by Road and Rail, June 2018
- IATA – International Air Transport Association
- Safe Work Australia – Classifying hazardous chemicals – National guide July 2020

16 ANY OTHER RELEVANT INFORMATION

Document details

Original Preparation Date: 16th June 2025

Prepared by: SYL(NINGBO)BATTERY CO.,LTD.

No. 23, Xingke Middle Road, Meilin Sub-district, Ninghai County, Ningbo City, Zhejiang Province.China

Product details

Packaging:

Product:SU120E60LM-B0

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