1. Product identification

Product Name:	SAJ Battery Module
Model:	BU2-5.0-HV1 BU2-5.0-HV5 BU2-5.0-HV1/5 is the internal battery module for SAJ H2 series hybrid inverters
Other Means of Identification:	Lithium-Ion Battery (LFP) UN3840 – Lithium-Ion Batteries
Product Use:	The product is to be used as an Energy Storage System
Emergency Telephone Number: **1800 888 725**	**Details of Manufacturer or Importer:** SAJ Digital Energy Australia Pty Ltd 11 banilla close, point cook VIC 3030

2. Hazards identification

Class 9 – Lithium batteries

Classification of the hazardous chemicals

EXEMPT FROM CLASSIFICATION ACCORDING TO AUSTRALIAN WHS REGULATIONS.

Hazard Label

No signal word, pictogram, hazard, or precautionary statements have been allocated, but there is a label for Transport of Dangerous Goods on the package.

Other hazards

This product is a Lithium Iron Phosphate Battery with certified compliance under the UN Recommendations on Transport of Dangerous Goods, Manual of Tests and Criteria, Part III, sub-section 38.3. For the battery cell, chemical materials are
stored in a hermetically sealed metal case, designed to withstand temperatures and pressures encountered during normal use. As a result, during normal use, there is no physical danger of ignition or explosion and chemical danger of hazardous materials' leakage. However, if exposed to a fire, added mechanical shocks, decomposed, added electric stress by misuse, the gas release vent will be operated. The battery cell case will be breached, and hazardous materials may be released. Furthermore,
if heated strongly by the surrounding fire, acid or harmful fume may be emitted.

3 Composition/Information on Substances

Chemical Name	CAS No.	Composition (%)
Lithium Iron Phosphate	15365-14-7	34.02
Carbon	7782-42-5	18.75
Aluminium	7429-90-5	4.89
Copper	7440-50-8	7.81
Separator	9003-07-0	4.85
Ethyl Methyl Carbonate	623-53-0	7.10
Ethylene Carbonate	96-49-1	4.74
Lithium Hexafluorophosphate	21324-40-3	2.76
Diethyl Carbonate	105-58-8	1.18
Propylene Carbonate	108-32-7	1.18
Carbon Black	1333-86-4	5.70
Poly(Vinylidene Flouride)	24937-79-9	0.71
Carboxymethyl Cellulose	9000-11-7	4.89

3. Description of First Aid Measures

General Advise:

- Move the victim into fresh air and out of the dangerous area.
- In case of contact with the electrolyte, Wash the contact area with water for at least 15 mins and take the victim to receive medical treatment.
- Show this safety data sheet to the medical professional in attendance.

Eye Contact – Immediately flush the eyes with plenty of clean water for at least 15 minutes, without rubbing. If appropriate procedures are not taken, this may cause an eye irritation. Seek medical attention if eye irritation persists.

Skin Contact – Take off all contaminated clothing and wash before reuse. Rinse skin with water for 15 min at least. If appropriate procedures are not taken, this may cause skin irritation. Seek medical attention if skin irritation occurs.

Inhalation Contact – Immediately move the victim to fresh air and remove the source of contamination from the area. Seek medical attention.

Ingestion – Have the victim rinse their mouth thoroughly with water. Seek medical attention.

4. Fire-Fighting Measures

Extinguishing Media

In case of fire, use ABC dry chemical fire extinguisher. Additional extinguishers such as cold water and dry powders are applicable.

Specific Hazards

Contents react with water. May explode if exposed to high temperatures due to pressure build up in battery casing. Lithium may burn in a fire situation and may be ejected from the battery. Damaged cells may evolve toxic and flammable vapours.

Special Protective Actions for Firefighters

Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) and protective gear in compliance with the Directive on Personal Protective Equipment 89/686/EEC when combating fire Evacuate area and contact emergency services.

Remain upwind and notify those downwind of hazard.. Use water fog to cool intact containers and nearby storage areas.

Toxic gases may be evolved in a fire situation.

5. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

- Evacuate personnel to a safe area and give first aid to injured victims once in a safe area.
- Eliminate all ignition sources, no smoking, sparks, flames, hot equipment, from the immediate area around the spill.
- Do not touch or walk-through spilled material.
- Avoid breathing vapors. Ensure adequate ventilation.

Environmental Precautions

Absorb spilled material with non-combustible, non-reactive absorbent. Prevent spilled material from being absorbed into soil or draining into sewers, and natural waterways.

Methods and Materials for Containment and Clean-up

If spilt, collect and reuse where possible. If battery is broken or damaged, absorb liquid with sand or similar. Contain spillage, then collect and place in suitable containers for disposal.
CAUTION: Avoid exposure to contents.

6. Handling and Storage

Precautions for Safe Handling

- Avoid mechanical damage of the energy system. Do not open or disassemble the energy system.
- Avoid short circuiting the cell.

Remove jewelry items such as rings, wristwatches, pendants, etc. that could contact the battery terminals if they are exposed.

- Keep away from open flames, hot surfaces, and sources of ignition.

Conditions for Safe Storage

Store tightly sealed in a cool, dry, well-ventilated area, removed from water, incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage, and sealed when not in use. Store within the recommended temperature of 15°C to 25°C with approximately 20-30% of the battery's nominal capacity. Examine regularly for leaks or spills.

7. Exposure Controls/Personal Protection

Exposure control measures

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

Engineering Controls

Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fume, and vapor.

Personal Protective Equipment

Eye Protection: Not necessary under normal use. Wear safety goggles when handling a ruptured or leaking battery cell.

Skin Protection: Not necessary under normal use for hands and body. Wear PVC or rubber gloves if handling a ruptured or leaking battery cell.

Respiratory Protection: Not necessary under normal use. In case of battery or cell rupture, use a self-contained full face respiratory mask.

8. Physical and Chemical Properties

Appearance

- Form – Quadrate Shape
- Color – Various
- Odor – If leaking, smells of medical ether.

Important health, safety, and environmental information

- pH Value – n.a
- Flash point – n.a
- Lower explosion limits – n.a
- Vapor pressure – n.a
- Density – n.a
- Water solubility: Insoluble ignition temperature – n.a

9. Stability and Reactivity

Stability – The product is stable.

Conditions to avoid – Keep away from open flames, hot surfaces, and other sources of ignition. Do not puncture, crush, or incinerate.

Materials to avoid – Oxidizing agents, alkalis, and water.

Hazardous Decomposition Products – In case of open cells, there is the possibility of Toxic Fumes being released and formation of peroxides.

Possibility of Hazardous Reactions – Will not occur.

Additional information – If there is a leak, it should not come into contact with strong oxidizers, mineral acids, strong alkalies, or halogenated Hydrocarbons.

10. Toxicological Information

Empirical data on effects on humans

If handled appropriately and if in accordance with the general safety or hygienic rules, there is no known risk or danger to health.

In the event of battery rupture and exposure to internal contents, vapour fumes maybe irritating to the eyes and skin.

11. Ecological Information

Mammalian effects – n.a

Eco-toxicity – n.a

Bioaccumulation potential – slowly bio-degradable

Environmental fate – n.a

12. Disposable Consideration

Advise on disposal – For recycling, consult local battery recyclers.

Contaminated packaging – Disposal in accordance with local regulations.

13. Transport Information

Label for conveyance – Class 9 Hazard Label

Identification Number – UN3840

Proper Shipping Name – Lithium-Ion Batteries

Packing Group – II (per GHS Regulation)

IMDG Code/TDG Packing Instruction – P903

Marine Pollutant – No

Hazard Classification – The goods shall be complied with the Packing Instructions TDG 22th Edition and the Packing Instructions P903 of IMDG Code (Amdt. 40-20) 2020 Edition, including the passing of the UN38.3 test.

14. Regulatory Information

Safety, health, and environmental regulations

Poison schedule

A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications

Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes

None allocated.

Risk phrases

None allocated.

Safety phrases

None allocated.

Inventory listing(s)

AUSTRALIA: AICS (Australian Inventory of Chemical Substances).

All components are listed on AICS or are exempt.

15. Other Information

The information and recommendations set forth in this Safety Data Sheet were prepared in accordance with the "Safe Work Australia's Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals [May 2018]" and the UN GHS [7th Revised Edition]. The data included is derived from various sources and believed to be accurate as of the date of preparation. However, SAJ Digital Energy Australia Pty. Ltd. does not assume responsibility for any alterations, modifications, or usage of this product outside of the methods prescribed as per this document. This information is furnished upon condition that person receiving it shall make his own determination of the suitability of the material for their particular purpose.