Safety Data Sheet

Issue Date:25 April 2024	Revision Date: -	Version: V01

SECTION 1 - IDENTIFICATION

Product Identifier

Product Name: Rechargeable Li-ion Battery
Models: GIV-BAT-9.5-G3

Other Means of Identification

SDS # SDS001
Synonyms: Lithium Iron Phosphate(LiFePO4, LFP)
Proper Shipping Name(ADG Code): Lithium-ion Battery
UN/ID No: UN3480

Recommended Use of the Chemical and Restrictions on Use

Recommended Use Energy Storage; Batter Packs

Details of Manufacturer or Importer

GivEnergy Australia Pty Ltd
Level 1, 1 Queens Road,
Melbourne VIC 3004
Australia

Emergency Phone Number

Emergency Telephone 1300 448 363(Australia)

SECTION 2 - HAZARDS IDENTIFICATION

Classification of the hazardous chemical

EXEMPT FROM HAZARD CLASSES AND CATEGORIES ACCORDING TO AUSTRALIAN GHS.

Label elements, including precautionary statements

No signal word, pictograms, hazard or precautionary statements have been allocated according to GHS.
But there is other label for Transport of Dangerous Goods on 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 opened. The battery cell case might be breached at the extreme condition, and hazardous materials might be released in such case. Moreover, if heated strongly by the surrounding fire, acrid or harmful fume may be emitted.

SECTION 3 - COMPOSITION & INFORMATION ON INGREDIENTS

Classification of the substance or mixture: ☐substance ☒mixture

Chemical Composition	CAS No.	Weight (%)
$LiFePO_4$	15365-14-7	38.4
C	7782-42-5	15.0
$LiPF_6$	21324-40-3	2.4
Copper	7440-50-8	9.0
Aluminum	7429-90-5	13
$C_3H_4O_3$	96-49-1	6.8
$C_2H_2F_2$	24937-79-9	6
$C_3H_6O_3$	616-38-6	5.2
$[C_2H_4]n$	9002-88-4	4.2

SECTION 4 – First Aid Measures

After eye contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
After skin contact: Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.
After inhalation: Remove from exposure and move tto fresh air immediately. Use oxygen if available.
After ingestion: Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

SECTION 5 – Fire Fighting Measures

Extinguishing Media: Hydrocarbon surfactant, CO_2.

Special Fire-Flghting Procedures: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Cell may vent when subject to excessive heat-exposing battery contents.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

SECTION 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:
If the battery is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the vapors to dissipate, Avoid skin and eyes contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerated. If leakage of the battery happens, liquid could be absorbed by using sand, earth or other inert substance and contaminated area should be ventilated meantime.
Environment precautions:
Do not allow product to reach sewage system or any water source.
Inform respective authorities in case of seepage into water course of sewage system.
Do not allow to enter sewers/ surface or ground water.
Methods and material for containment and cleaning up:
If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters.

SECTION 7 – Handling and Storage

Handling: The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.
Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire.
Do not crush or puncture the battery, or immerse in liquids.
Storage: Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided.
Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.
Other Precautions: The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

SECTION 8 – Exposure Controls, Personal Protection

Engineering control: Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor.
Personal Protective Equipment:
Respiratory Protection: Not necessary under conditions of normal.
Skin and body Protection: Not necessary under conditions of normal. Wear suitable protective clothing and gloves if handling an open or leaking battery.
Hand protection: Wear suitable protective clothing and gloves if handling an open or leaking battery.
Eye Protection: Not necessary under conditions of normal. Wear suitable protective clothing and gloves if handling an open or leaking battery.
Other Protective Equipment: Have a safety shower and eye wash fountain readily available in the immediate work area.
Hygiene Measures: Do not eat, drink, or smoke in the work area. Maintain good housekeeping

Personal Protection:

Hand protection	Eye protection
 *Protective gloves*	 *Tightly sealed goggles*

SECTION 9 – Physical and Chemical Properties

Information on basic physical and chemical properties	
Appearance	White and black
Odour	N/A
pH	N/A
Melting point/freezing point	N/A
Boiling Point and Boiling range	N/A
Flash Point	N/A
Upper/lower flammability or explosive limits	N/A
Vapor pressure	N/A
Vapor Density	N/A
Relative density	N/A
Solubility in water	N/A
Auto-ignition temperature	N/A
Decomposition temperature	N/A
Evaporation rate	N/A
Flammability (soil, gas)	N/A
Viscosity	N/A

SECTION 10 – Stability and Reactivity

Information on basic stability and reactivity	
Stability	The product is stable under conditions description Section 7
Conditions to Avoid	Heat above 70℃ or incinerate. Deform, Mutilate, Crush, Disassemble, Overcharge, Short circuit, Expose over a long period to humid conditions.
Incompatible Materials	Oxidizing agents, acid, base.
Hazardous Decomposition Products	Carbon monoxide, carbon dioxide, lithium oxide fumes.
Possibility of Hazardous Reaction	N/A

SECTION 11 – Toxicological Information

Irritation	Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin. Eyes and respiratory tract may occurs.
Sensitization	N/A
Neurological Effects	N/A
Teratogenicity	N/A
Reproductive Toxicity	N/A
Mutagenicity (Genetic Effects)	N/A
Toxicologically Synergistic Materials	N/A

SECTION 12 – Ecological Information

Ecological Toxicity	N/A
Mobility in soil	N/A
Persistence and Degradability	N/A
Bioaccumulation potential	N/A
Other Adverse Effects	N/A

SECTION 13 – Disposal Considerations

Product disposal recommendation	Observe local, state and federal laws and regulation.
Packaging disposal recommendation	Disposal must be made according to official regulations.

SECTION 14 – Transport Information

Label for conveyance	Lithium Battery Label	
UN Number	UN3480 or UN3481	
Transport hazard class (es)	9	
Packing group	965 or 966	II
	967	--
Marine pollutant	No	
UN proper shipping name	Lithium ion Batteries (Including lithium ion polymer batteries) Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) Lithium ion Batteries contained in equipment (Including lithium ion polymer batteries)	
ICAO/IATA	Can be shipped by air in accordance with international Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA) DGR 65th Packing Instructions Section IA of 965~967 appropriately.	
IMDG CODE	International Maritime Dangerous Goods Code IMDG CODE (Amdt 41-22)	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
The dangerous goods regulations require that each battery design be subject to tests contained in Section 38.3 of t he UN Manual of Tests and Criteria prior to being for transport.		

SECTION 15 – Regulatory Information

Law information

《Dangerous Goods Regulations》
《Recommendation on the Transport of Dangerous Goods Model Regulations》
《International Maritime Dangerous Goods》
《Technical Instructions for the Safe Transport of Dangerous Goods》
《Classification and code of dangerous Goods》
《Consumer Product Safety Act》 (CPSA)
《Federal Environmental Pollution Control Act》 (FEPCA)
《Resource Conservation and Recovery Act》 (RCRA)
《European Agreement concerning the International Carriage of Dangerous》
《Regulations concerning the International Carriage of Dangerous》

In according with all Federal, State and local laws.

SECTION 16 – Other Information

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Document prepared by:

GivEnergy Australia Pty Ltd
Level 1, 1 Queens Road Melbourne VIC 3004
Australia
Contact email: martin@givenergy.com
Phone: 1300 448 363