Safety Data Sheet
according to WHS Regulations

Print date: 29.02.2024 Revision date: 29.02.2024

1 Identification

Product Name: LI RECHARGEABLE FRIDGE/FREEZER BATTERY PACK

Other Means of Identification: Mixture

Product Code: 10001044, 10001045, 10001284

Product Parameters:
Nominal Voltage: 11.1 V
Nominal Capacity: 31.2 Ah
Watt-hour Rating: 346.32 Wh

Recommended Use of the Chemical and Restriction on Use: Energy storage

Details of Manufacturer or Importer:
Adventure Trading Australia Pty Ltd
71 Charles Ulm Place
Eagle Farm QLD 4009

Phone Number: (07) 3193 1110

Emergency telephone number: National Poisons Information Centre: 13 11 26

2 Hazard(s) Identification

Hazardous Nature:
Not classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Batteries are considered as articles and are as such exempted from the UN-GHS classification requirements.
The classification based on the hazardous substances contained in the product (electrode materials and liquid electrolyte contained in the batteries) is provided below for information purposes only.
Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).


Health hazard

Carcinogenicity 2	H351	Suspected of causing cancer.
Toxic To Reproduction 1B	H360F	May damage fertility.
STOT RE 1	H372	Causes damage to the bones and the teeth through prolonged or repeated exposure. Route of exposure: Inhalation.


Corrosion

Skin Corrosion/Irritation 1A	H314	Causes severe skin burns and eye damage.
Eye Damage 1	H318	Causes serious eye damage.


Environment

Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.

Acute Toxicity (Oral) 4	H302	Harmful if swallowed.

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Signal Word Danger

Hazard Statements
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H351 Suspected of causing cancer.
H360F May damage fertility.
H372 Causes damage to the bones and the teeth through prolonged or repeated exposure. Route of exposure: Inhalation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dusts or mists.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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.
P310 Immediately call a POISON CENTER/doctor.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P321 Specific treatment (see on this label).
P314 Get medical advice/attention if you feel unwell.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures
Description: Formulated article - battery for energy storage

Hazardous Components:		
CAS: 12190-79-3	Lithium cobaltite Carcinogenicity 2, H351; Toxic To Reproduction 1B, H360F; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	49.5%
CAS: 21324-40-3	Lithium hexafluorophosphate Acute Toxicity (Oral) 3, H301; STOT RE 1, H372; Skin Corrosion/ Irritation 1A, H314; Eye Damage 1, H318	10.96%
CAS: 24937-16-4	Nylon 12 Eye Damage 1, H318; Aquatic Chronic 2, H411	3.93%

Non Hazardous Components:		
CAS: 7782-42-5	Graphite	16.3%
CAS: 7429-90-5	Aluminium	7.6%
CAS: 7440-50-8	Copper	6.96%

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Additional information:
The battery is sealed hermetically and designed to withstand temperatures and pressures encountered during normal use. Thus, the ingredients have no hazard potential except if the battery is violated or dismantled. If exposed to a fire, mechanical shocks, and electric stress by misuse, the battery cell case will be breached and the hazardous materials may be released and acrid gas may be emitted. Therefore the batteries should not be short circuited, overcharged, punctured, incinerated, immersed in water, force discharged or exposed to temperatures above the temperature range of the cell or battery.

4 First Aid Measures

General Information: This information is relevant only if the battery is broken and contents are exposed.

Inhalation:
If the battery inner contents are inhaled, remove to fresh air. Seek medical attention if breathing problems develop.

Skin Contact:
In case of the battery inner contents skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek immediate medical attention.

Eye Contact:
In case of battery inner contents eye contact, rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Seek immediate medical attention.

Ingestion:
If swallowed, do not induce vomiting. Immediately rinse mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:
Inhalation: The battery inner contents may cause respiratory irritation. Causes damage to the bones and the teeth through prolonged or repeated exposure.
Skin Contact: The battery inner contents cause severe skin burns.
Eye Contact: The battery inner contents cause serious eye damage.
Ingestion: May cause burns to the mouth, nose, throat and oesophagus. Harmful in swallowed. May cause gastrointestinal irritation, nausea, diarrhoea and vomiting.

5 Fire Fighting Measures

Suitable Extinguishing Media: Use fire extinguishing methods suitable to surrounding conditions.

Specific Hazards Arising from the Chemical:
Hazardous combustion products include oxides of carbon and phosphorus flouride.
Product is not flammable.
Containers close to fire should be removed only if safe to do so. Use water spray to cool fire exposed containers.
Prevent run-off from fire fighting entering drains or water courses.

Special Protective Equipment and Precautions for Fire Fighters:
When fighting a major fire wear self-contained breathing apparatus and protective equipment.

6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:
If dealing with an electrolyte leakage and irritating vapours are generated, an approved half face inorganic vapours and gases/acid gases/particulate respirator is required, solvent resistant gloves, protective clothing, apron and boots. Evacuate all non-essential personnel from affected area and allow the vapours to dissipate. Avoid eye and skin contact and inhalation of vapors or fumes. Ensure adequate ventilation. Eliminate all ignition sources. Avoid sparks and open flames. No smoking.

Environmental Precautions:
In the event of a major spill, prevent spillage from entering drains or water courses.

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Inform respective authorities in case of seepage into water course or sewage system.

Methods and Materials for Containment and Cleaning Up:
The material contained within the battery is released only in the case of mechanical, electrical or thermal abuse. In the event of battery rupture and leakage allow the batteries to cool and the vapour to dissipate. Stop leak if safe to do so and absorb spill with sand, earth or some other inert absorbent material. Collect the spilled material and place into a suitable plastic lined container for disposal. Clean spill surface with detergent and water, collect all contaminated wash water for proper disposal.

7 Handling and Storage

Precautions for Safe Handling:
Charge according to manufacturer's specifications.
Do not overcharge, short-circuit, force discharge, disassemble, crush, deform, expose to high temperatures or incinerate. Do not allow battery terminals to contact each other or other metals. Do not weld, solder or in any way modify batteries. Do not damage or remove the external casing. Ensure batteries are installed with the correct polarity.
Use of safe work practices are recommended to avoid eye or skin contact and inhalation of dust.
Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:
Store in a cool, dry and well ventilated area. Avoid exposure to air over prolonged periods. Ensure battery terminals are protected during storage. Batteries must be packed in a manner to prevent short circuits. Loose batteries should not be stored in bulk. Protect from mechanical and electrical abuse such as short circuiting, overcharging, installing with incorrect polarity, disassembling or crushing. Protect from heat, sparks, open flames and direct sunlight. Avoid excessive moisture. Keep out of reach of children. Store locked up. Keep away from oxidising agents.

8 Exposure Controls and Personal Protection

Exposure Standards:	
CAS: 7782-42-5 Graphite	
WES	TWA: 3 mg/m³
CAS: 7429-90-5 Aluminium	
WES	TWA: 10* 5** mg/m³ *metal dust;**welding, pyro powders
CAS: 7440-50-8 Copper	
WES	TWA: 1* 0.2** mg/m³ *dust & mists (as Cu) **fume

Engineering Controls:
Ensure adequate ventilation of the working area if the battery inner contents are exposed, keeping airborne concentrations below occupational exposure standards.

Respiratory Protection:
Respiratory protection is not required under normal use conditions.
However, if dealing with an electrolyte leakage and irritating vapours are generated, an approved half face inorganic vapours and gases/acid gases/particulate respirator is required. See Australian Standards AS/NZS1715 and 1716 for more information.

Skin Protection:
Skin protection is not required under normal use conditions.
If the battery inner contents are exposed use chemical resistant gloves. See Australian/New Zealand StandardAS/NZS 2161 for more information.
When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered. Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be

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determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:
Eye protection is not required under normal use conditions.
If the battery inner contents are exposed wear safety glasses for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9 Physical and Chemical Properties

Appearance:	
Form:	Prismatic solid
Colour:	Black
Odour:	Odourless
Odour Threshold:	No information available
pH-Value:	Not applicable
Melting point/freezing point:	No information available
Initial Boiling Point/Boiling Range:	No information available
Flash Point:	Not applicable
Flammability (solid, gas):	Not flammable
Auto-ignition Temperature:	No information available
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	Not applicable
Relative Density:	No information available
Vapour Density:	Not applicable
Evaporation Rate:	Not applicable
Solubility in Water:	Insoluble
Partition Coefficient (n-octanol/water):	No information available
Viscosity:	No information available

10 Stability and Reactivity

Possibility of Hazardous Reactions: No dangerous reactions known under conditions of normal use.

Chemical Stability: Stable at ambient temperature and under normal conditions of storage and use.

Conditions to Avoid:
Mechanical and electrical abuse such as short circuiting, overcharging, installing with incorrect polarity, disassembling or crushing. Protect from heat, sparks and open flames. Avoid excessive moisture.

Incompatible Materials: Oxidising agents.

Hazardous Decomposition Products: Oxides of carbon and phosphorus flouride.

11 Toxicological Information

Toxicity:

LD50/LC50 Values:		
CAS: 21324-40-3 Lithium hexafluorophosphate		
Oral	LD50	>50-300 mg/kg (Rattus norvegicus (rat)) (OECD Test Guideline 423)
CAS: 7440-50-8 Copper		
Oral	LD50	>2,000 mg/kg (Rattus norvegicus (rat))

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Acute Health Effects
Inhalation:
The battery inner contents may cause respiratory irritation. Causes damage to the bones and the teeth through prolonged or repeated exposure.
Skin: The battery inner contents cause severe skin burns.
Eye: The battery inner contents cause serious eye damage.
Ingestion:
May cause burns to the mouth, nose, throat and oesophagus. Harmful in swallowed. May cause gastrointestinal irritation, nausea, diarrhoea and vomiting.

Skin Corrosion / Irritation: Causes severe skin burns.

Serious Eye Damage / Irritation: Causes serious eye damage.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity:
Suspected of causing cancer.
Polyethylene and cobalt and cobalt compounds are classified by IARC as Group 3 - Not classifiable as to its carcinogenicity to humans.

Reproductive Toxicity: May damage fertility.

Specific Target Organ Toxicity (STOT) - Single Exposure:
Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Causes damage to the bones and the teeth through prolonged or repeated exposure. Route of exposure: Inhalation.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects: No data associated with long term health effects.

Existing Conditions Aggravated by Exposure: No data available.

12 Ecological Information

Ecotoxicity:

Aquatic toxicity:
Very toxic to aquatic life with long lasting effects.

CAS: 7440-50-8 Copper	
EC50/48 h	0.792 mg/l (Daphnia magna (water flea))
EC50/72 h	0.333 mg/l (Algae)
LC50/96 h	0.0068-0.0156 mg/l (Pimephales promelas (fathead minnow))

Persistence and Degradability: No data available on finished product.

Bioaccumulative Potential: No data available on finished product.

Mobility in Soil: No data available on finished product.

Other adverse effects: No further relevant information available.

13 Disposal Considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.

Special Precautions for Landfill or Incineration:
Please consult your state Land Waste Management Authority for more information.

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14 Transport Information

UN Number
ADG, IMDG, IATA UN3480 or UN3481

Proper Shipping Name
ADG, IMDG, IATA LITHIUM ION BATTERIES or
LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT

Dangerous Goods Class
ADG Class: 9

Packing Group:
ADG, IMDG, IATA -

EMS Number: F-A,S-I

Special Provisions: 188, 230, 310, 348, 376, 377, 384, 387 and 360, 390 (UN3481 only)

Excepted quantities (EQ): E0

Limited Quantities: 0

15 Regulatory Information

Australian Inventory of Industrial Chemicals:
All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Poison Schedule:
Not a scheduled poison.

16 Other Information

Date of Preparation or Last Revision: 29.02.2024

Prepared by: MSDS.COM.AU Pty Ltd www.msds.com.au

Abbreviations and acronyms:
ADG: Australian Dangerous Goods
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
IARC: International Agency for Research on Cancer
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)
Acute Toxicity (Oral) 3: Acute toxicity – Category 3
Acute Toxicity (Oral) 4: Acute toxicity – Category 4
Skin Corrosion/Irritation 1A: Skin corrosion/irritation – Category 1A
Eye Damage 1: Serious eye damage/eye irritation – Category 1
Carcinogenicity 2: Carcinogenicity – Category 2
Toxic To Reproduction 1B: Reproductive toxicity – Category 1B
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term (Chronic). Category 2

Disclaimer
This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - July 2020”.
The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance. Adventure Trading Australia Pty Ltd makes no representation of the accuracy or

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