APbattery-51.2V6.5kWh

Safety Datasheet

Date of Issue: 15-May-2024 Rev1.0

Section 1: Product Name and Identification

1.1 Product Identifier:

1.1.1 Product Name: Lithium Ion Battery

1.1.2 Product Model: APbattery-51.2V6.5kWh

1.1.3 Product Description: Rechargeable lithium ion battery (32 cells)

1.2 Product Use

1.2.1 Identified Uses: The product is to be used as an alternating current (AC)-coupled energy storage system primarily used with photovoltaic systems.

1.2.2 Use Restrictions: Battery can be installed indoors or outdoors. Ensure the following conditions are satisfied:

- A deviation of $-5° \leqslant \theta \leqslant 5°$ is allowed for both installation against wall and floor.
- It is recommended to build sunshade & rain shelter to avoid direct exposure to sunlight and rain;
- Keep the dirt or dust at a minimal level;
- Do not install battery in a place where flood frequently occurs;
- Do not install battery in highly humid area such as bathroom;
- Ensure direct contact between battery shell and ambient air. Do not cover or Shield battery to avoid poor cooling.

1.3 Details of the Supplier of the Safety Data Sheet

Jingning Yuneng Technology Co.,Ltd
Room 503, 5th Floor, No.60, Tongji Street, Liandu, Lishui, Zhejiang, China
Emergency telephone call：+86-769-38868888

Section 2: Hazard Identification

Hazard Classification

Hazard label	 Class 9-Lithium batteries
Explosive risk	This article does not belong to the explosion dangerous goods
Flammable risk	This article does not belong to the flammable material
Oxidation risk	This article does not belong to the oxidation of dangerous goods
Toxic risk	This article does not belong to the toxic dangerous goods
Radioactive risk	This article does not belong to the radiation of dangerous goods
Mordant risk	This article does not belong to the corrosion of dangerous goods
Other risk	Which belong to the Lithium Ion Battery

Section 3: Composition/Information on Ingredients

Chemical Composition	Content /%	CAS NO.	Remark
Graphite	7-25	7782-42-5	--
Lithium Iron Phosphate	15-40	15365-14-7	--
Hexafluoropropylene-Vinylidene Fluoride Copolymer	3-15	9011-17-0	--
Lithium Hexafluorophosphate	0-5	21324-40-3	--
Diethyl Carbonate	0-15	105-58-8	--
Dimethyl Carbonate	0-15	616-38-6	--
Ethyl Methyl Carbonate	0-15	623-53-0	--
Propylene Carbonate	0-15	108-32-7	--
Ethylene Carbonate	0-15	96-49.1	--
Copper	10-12	7440-50-8	--
Aluminium	3-5	7429-90-5	--
Nickel	0-1	7440-02-0	--

Section 4: First-Aid Measures

Eye

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

Inhalation

Remove from exposure and move to fresh air immediately. Use oxygen if available.

Ingestion

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

Section 5: Fire-Fighting Measures

Flash Point: N/A.

Auto-Ignition Temperature: N/A.

Extinguishing Media: Water, CO_2.

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

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

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

Section 6: Accidental Release Measures

Steps to be Taken in case Material is Released or Spilled

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear put hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

Waste Disposal Method

It is recommended to discharge the battery to the end, to use up the metal lithium inside the battery, and to bury the discharged battery in soil.

Section 7: Handling and Storage

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.

Precautions to be taken in handling and storing

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

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use.

Ventilation

Not necessary under conditions of normal use.

Protective Gloves

Not necessary under conditions of normal use.

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

Personal Protection is recommended for venting battery Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

Section 9: Physical and Chemical Properties

Odors: If leaking, smells of medical ether.

pH: Not applicable as supplied.

Flash Point: Not applicable unless individual components exposed.

Flammability: Not applicable unless individual components exposed.

Relative density: Not applicable unless individual components exposed.

Solubility(water): Not applicable unless individual components exposed.

Solubility(other): Not applicable unless individual components exposed.

Section 10: Stability and Reactivity

Stability: Product is stable under conditions described in Section 7.
Conditions to Avoid: Heat above 70 °C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.
Materials to avoid: Oxidising agents, alkalis, water.
Hazardous Decomposition Products: Toxic Fumes, and may form peroxides.
Hazardous Polymerization: N/A.
If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated Hydrocarbons.

Section 11: Toxicological Information

Signs & symptoms: None, unless battery ruptures.
In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.
Inhalation: Lung irritant.
Skin contact: Skin irritant.
Eye contact: Eye irritant
Ingestion: Poisoning if swallowed.
Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to server irritation, burning and dryness of the skin may occur, Target Organs nerves, liver and kidneys.

Section 12: Ecological Information

Mammalian effects: None known at present.
Eco-toxicity: None known at present.
Bioaccumulation potential: Slowly Bio-degradable.
Environmental fate: None known environmental hazards at present.

Section 13: Disposal Considerations

Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

Section 14: Transport Information

Label for conveyance: Class 9 Hazard Label; Cargo aircraft only label.
UN Number: UN3480
Proper Shipping name: Lithium ion batteries
IMDG Code/TDG Special provisions: 230, 310, 348, 376, 377, 384, 387
IMDG Code/TDG Packing Instruction: P903
IATA DGR Packing Instructions: Section IA of 965
EmS No: F-A, S-I
Marine pollutant: No
Hazard Classification: The goods shall be complied with the requirements of IMDG CODE (Amdt.39-18) Edition, TRANSPORT OF DANGEROUS GOODS Model Regulations (Rev.21), including the passing of the UN38.3 test.

Section 15: Regulatory Information

The laws and regulations applicable to the transportation of lithium batteries are as follows:
The UN Model Regulations, United Nations ST/SG/AC. 10/I/Rev 22. Recommendations on the Safe Transport of Dangerous Goods
The International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air Transport
The International Air Transport Association (IATA) Dangerous Goods Regulations (64th Edition 2023)
Intemational Maritime Organization (IMO) International Maritime Dangerous Goods Code (IMDG Code) 2020
UNITED NATIONS Recommendations on the Authorisation Dangerous Road Model Regulations (2023 edition)
JT/T 617-2018 Regulations concerning road transportation of dangerous goods.

Section 16: Other Information

Users should read this file carefully, and use the batteries in correct method. Jingning Yuneng Technology Co., Ltd. doesn't assume responsibility for any damage or loss Because of misuse of batteries.

Revision history

Revision	Date	Description
Rev1.0	May 2024	Initial release

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